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FIGURATIVE LANGUAGE USAGE IN COUNSELING
AND ITS RELATION TO
METAPHORIC COMPREHENSION
AND
DIVERGENT THINKING

by

© DAVID ALLAN HANNAH

A THESIS
SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF EDUCATION IN COUNSELING PSYCHOLOGY

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

EDMONTON, ALBERTA

FALL, 1982

Sept 20/82

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled FIGURATIVE LANGUAGE USAGE IN COUNSELING AND ITS RELATION TO METAPHORIC COMPREHENSION AND DIVERGENT THINKING submitted by David Allan Hannah in partial fulfilment of the requirements for the degree of Master of Education in Counseling Psychology.

W. Hague

Supervisor

D. D.

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DATE Sept. 13/82

Abstract

In recent years counseling theorists and researchers have shown an increasing interest in the role of figurative or metaphorical language in counseling. This study examines the notion that figurative language may have special communicative and therapeutic abilities that literal language lacks. The study focuses on the client's use of figurative language as a means of expression, rather than on the counselor's use of such language as a tool of therapy.

Both the philosophical and psychological literature relevant to the topic are reviewed. Previous studies of the use and functions of figurative language in counseling are examined particularly closely. While these studies generally claim that figurative language does have special functions within the context of counseling, they seem to be based on an untested assumption: namely, that people use figurative expressions differently (i.e., more often) in counseling than they do in other communication situations. This is the central issue examined in the present study. The primary question addressed is whether or not people use more figurative language when discussing an intense, emotional, and personally meaningful topic than when discussing a more mundane one. This study also addresses two secondary issues. The first concerns the nature of the relationship between different measures of figurative language competence, while the second concerns the relationship between the divergent-thinking component of creativity and figurative language abilities.

In order to examine these issues a study was designed in which 50 students were interviewed on each of two topics. One topic was designed to be intense, emotional and personally meaningful to the subject, while the other was less so. Two other instruments were also administered to the subjects. The first was Kogan's Metaphoric Triads Task (M.T.T.), a test of visual metaphor comprehension and preference. The second consisted of three subtests of the Torrance Tests of Creative Thinking (T.T.C.T.), which measure the divergent thinking component of creativity.

Segments of all interviews were analyzed for their figurative language content, the other instruments were scored, and statistical analyses of this data were carried out. It was hypothesized that subjects would use significantly more figurative language when discussing the intense, emotional, and meaningful topic than when discussing the mundane one. This hypothesis received strong support. Analyses of variance yielded F scores for three types of figurative language ranging from 4.03 to 9.41, all of which were significant at the .05 level or better.

It was also hypothesized that because previous research suggested that metaphoric competence was a multi-dimensional domain, there would likely not be a consistent pattern of significant correlations between subjects' M.T.T. scores and their production of figurative language in the interviews. This hypothesis also received strong support, as only two of the 64 correlations between these variables were significant at the .05 level. These results are consistent with the concept of figurative competence as multi-dimensional.

Finally, it was hypothesized that there would be significant correlations between subjects' T.T.C.T originality scores, M.T.T. comprehension and preference scores, and novel figurative language production scores. This hypothesis was only partially supported. While the originality of subjects' divergent thinking was found to be significantly correlated with M.T.T. comprehension and preference, it was not significantly correlated with any measure of figurative language production.

The theoretical and practical implications of the above findings are examined. The major conclusion of the study is that people do use more figurative language in counseling-type settings, and thus it is likely that such language does perform special functions in counseling.

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CHAPTER ONE

INTRODUCTION

I. Background to the Study

Effective communication is the most important prerequisite for effective counseling: an accurate understanding between the counselor and the client forms the foundation of the counseling relationship. The primary communication medium of counseling is speech. Almost all of the major forms of counseling or psychotherapy depend heavily on the client and the counselor talking to one another in order to gain an understanding of the nature of the client's problem and develop strategies for dealing with it.

Because of its importance, language has received much attention from counseling researchers and theorists, who have suggested that in addition to the important communicative tasks it performs, language may also significantly affect people's thought processes and the way that they perceive reality. Some have also argued that language may have therapeutic functions within the counseling context. Generally speaking, then, language is seen as being an important factor in the counseling process because of its communicative functions, its phenomenological functions, and its possible therapeutic functions.

One aspect of language that, despite its ubiquity, has received very little attention in psychological literature until recently is figurative or metaphorical language. That our language is full of figurative words and expressions is apparent after even the most superficial examination. Sayce (1880) claims that three-quarters of the language consists of worn-out metaphors. Gordon (1961) makes the same point. Embler (1959) notes that our everyday language is suprisingly metaphorical in nature, and gives examples of dozens of common words which are in essence metaphors, but which we never think of as such. He explains that such words as up, down, hard, soft, in, out, big, small, cold, and hot are often used figuratively in ways that reveal many of the deep-seated beliefs and mental attitudes accepted within our culture. These and other familiar figurative expressions

> are tangible manifestations of deeply rooted modes of perception and conceptualization. They represent categories or models for interpreting the universe (Force and Force, 1961).

Common figures of speech such as those mentioned above are usually referred to as 'frozen' or 'dead' figures because, while they are metaphorical in orgin, they have lost their metaphorical associations and are now generally seen as being literal. Though it is certainly true that people use a tremendous number of these 'frozen' figures in their conversation, it is also true that they use a remarkable number of relatively novel figures of speech as well. Pollio, Barlow, Fine, and Pollio (1977) have estimated that in addition to the approximately ten to twenty million frozen figures the average person is likely to use in his lifetime, he will probably produce another four and a half to nine and a half million novel figures (p. 9). These and other theorists and researchers believe that such novel figurative language may be more revealing of individuals' modes of perceiving and interpreting the world than is the frozen figurative language they use.

The sheer volume of figurative language that people use in their everyday lives warrants research in the area by those interested in interpersonal communication. The importance that figurative language may have in mediating experience makes its investigation even more promising. Such language deserves attention for another important reason. Many of those interested in the nature and function of language have expressed the view that figurative language is significantly different from literal language, in that it may be able to communicate many ideas and emotions more effectively. In fact, some are convinced that figurative language is capable of expressing thoughts and feelings that are otherwise inexpressible. Such language seems particularly well suited to the expression of many of the highly subjective aspects of our experience. Perhaps this is why almost all terms that are used to refer to psychological phenomena are metaphorical in the sense that they orginally had some sort of physical referent. As Asch (1958) notes,

> when we describe the workings of emotions, ideas, or trends of character, we almost invariably employ terms that also denote properties and processes observable in the world of nature. (p.86)

Mair (1977) expands this idea when he points out that

> it is easy to see metaphor in use when we or others try to grasp and convey personal experience, feelings or almost inarticulate concerns. We talk of feeling 'high' or 'low', 'rough' or 'flattened', 'torn apart' or 'hemmed in', 'depressed' or 'elevated', 'warmly' or 'coldly'. All these are, of course, metaphors carried over from the physical world to allow us some means of patterning that which we can dimly sense but cannot see or touch physically. Such metaphors help us to 'grasp' or 'get a hold of' what we experience, they allow us to 'get things out' so that we can 'do something with them'. (p. 24)

Because psychology in general, and counseling psychology in particular, are very much involved in the study of interpersonal communication and the nature of subjective experience, it might be expected that these disciplines would be engaged in the investigation of the role of figurative language in them. Yet while many have speculated about its special communicative abilities and the functions it might play in structuring human experience, relatively few have engaged in any empirical research of these issues.

One of the major reasons for this state of affairs is that, in its quest to be 'scientific', psychology has been tainted by the positivist attitudes that pervade modern science. Positivist thinkers have historically held a very negative attitude towards figurative language. They have viewed it as an addition to, or an embellishment of language rather than as a carrier of true meaning. On this matter Ortony (1977) writes,

> a basic notion of positivism was that reality could be precisely described through the medium of language in a manner that was clear, unambiguous and, in principle, testable--reality could, and should, be literally describable. Other uses of language were meaningless, for they violated this empiricist criterion of meaning. (p.1)

This antipathy towards non-literal language has been carried over into psychology, and has resulted in psychology largely ignoring the phenomenon.

However, if there is substance to any of the claims made for figurative language above, it certainly merits closer study. In addition, if such language consists of more than mere verbal ornamentation, it is important for counselors to recognize that the similes, metaphors, analogies and other figures that people use when discussing their lives in a counseling setting may be important conveyors of personal meaning, and should thus be closely attended to. The danger in failing to understand figurative language is that we may miss much of what our clients are trying to tell us about themselves--an unfortunate situation in any interpersonal relationship, but a critical one in counseling, where the primary task for the counselor is to gain an accurate understanding of the client and his experience of the world.

II. The Present Study

Pollio et al. (1977) present the results of some research done on the quantity of figurative language used in a variety of types of psychotherapy interviews. These figures indicate that "for psychoanalytic and Gestalt therapy sessions the total amount of figurative language used comes to about 5.5 figures per 100 words" (p.7). Even in student therapy sessions of a much less intense nature about 2.2 figures per 100 words are found. The same authors point out that "most psychotherapists will attest to the rich and disturbingly imaginative metaphoric articulations patients often make in their attempts to solve perplexing problems" (p.104). Thus, it seems fair to say that figurative language is used quite regularly within the contexts of counseling and psychotherapy.

In fact, the present study suggested itself when the author noticed that a number of his counseling clients were consistently making use of figurative language when trying to express to him some sense of who they were and the sorts of experiences that had led them to seek counseling. Once he had made this observation, he became very sensitive to the use of figurative language around him, and was surprised at just how much of it was used in the counseling context. In researching the literature on the subject he discovered that while a number of psychologists had done research in this area, one of the most basic questions regarding the use of figurative language within counseling had not been directly addressed. Researchers assumed that people used such language differently within the context of counseling than they did in other contexts, and based the interpretation of their results on this assumption. Yet no one had attempted to verify this asssumption empirically.

It is important to address this issue: before any claims can be made about the functions of figurative communication peculiar to the counseling setting, it must first be established that people do, in fact, use figurative language differently within this context than they do otherwise. Only when this point has been established does it make sense to further examine the specific roles that figurative language might have in counseling.

It is this issue that is the primary focus of the present study. To be more specific, the main question that the study addresses is whether or not people tend to use more figurative language when discussing a topic that is similar to one that might be discussed in a counseling session than they do when discussing a topic that is similar to a more ordinary, everyday subject of conversation.

In addition to this primary question, a number of secondary issues are also examined. One of these concerns the nature of figurative competence. Previous research has found evidence that the degree to which individuals are considered competent in this area is determined largely by the figurative task given or the component of figurative language examined--comprehension, preference, explication, or production. Studies have shown that people may perform at a high level on a figure comprehension task, but less well on production task, or vice versa. These results suggest that figurative competence is a multi-dimensional rather than a unidimensional domain. Because of this, some researchers have strongly recommended that future research should include more than a single measure of figurative ability. The present study takes this suggestion into account by including two different measures of figurative abilities, and thus allows an examination of the relationship between different figurative tasks. It is hoped that this examination will provide additional information on the nature of figurative language competence.

Another secondary focus of this study concerns the relationship between creativity and figurative language abilities. While the literature indicates that there seem to be good theoretical reasons for expecting a significant relationship between these two domains, the empirical evidence on this matter is inconsistent. By including a measure of creativity in this study it may be possible to shed some additional light on this issue.

In summary, then, the present study has a number of purposes. The primary one is to determine whether or not people use more figurative language in communication situations that are analogous to those that take place in counseling than they do in more ordinary communcation situations. The secondary purposes are to investigate the nature of figurative competence by examining the relationship between people's performance on two different figurative tasks, and to look into the relationship between creativity and figurative abilities.

In order to examine these questions a study was designed in which 50 university summer school students were interviewed on each of two topics. One topic was designed to be quite intense, emotional and personally meaningful to the subject, and was thus considered to be analogous in many ways to the type of topic often dealt with in counseling situations. The other topic was less intense, emotional and personally meaningful to the subject, and was intended to be analogous to a more ordinary, every-day topic of conversation. Once all subjects had been interviewed on both topics, segments of the interviews were transcribed and judged for the amount of figurative language produced. The amount of figurative language used in discussing each of the two topics was then compared in order to determine whether or not a significant difference existed between them.

Two other instruments were also administered to the subjects. The first was Kogan's Metaphoric Triads Task (M.T.T.), which required subjects to choose from among three pictures projected on a screen the best pairing or pairings, and to explain the reason(s) for their selection(s). This instrument is a measure of figurative abilities, and provides scores on subjects' comprehension of and preference for figurative or metaphorical pairings. The subjects' M.T.T. comprehension and preference scores were then compared with their figurative language production in the two interview situations in order to determine the degree to which these different figurative competencies were correlated.

The second instrument consisted of three subtests of the Torrance Tests of Creative Thinking (T.T.C.T.). These subtests were used to measure the divergent thinking component of creativity. By comparing subjects' performance on the creativity tasks with their performance on each of the different figurative tasks it was possible to determine whether or not these two domains were significantly correlated with one another.

III. Questions Addressed and Hypotheses

A. Primary - The main question addressed in this study is whether or not people use different amounts of figurative language in different sorts of communication situations. It is hypothesized that subjects will use significantly more figurative language of all types when discussing a more intense, emotional, and personally meaningful topic than when discussing one that is less so.

B. Secondary

1. Figurative Competence Domain - The next question addressed concerns whether or not there are any significant correlations between subjects' scores on the different measures of figurative ability. Because the relationship between the production of figurative language in conversational situations and the comprehension of and preference for metaphor as measured by the M.T.T. has not been previously examined, specific hypotheses concerning this relationship have not been developed. However, on the basis of other studies using multiple measures of figurative abilities whose

results have indicated that figurative competence is a multidimensional domain, it is thought probable that individuals will not perform equally well on the tasks of figurative production, metaphor comprehension and metaphor preference. Therefore, significant correlations are not expected between these various measures of figurative competence.

2. Creativity and Figurative Competence - The final question addressed in this study concerns the relationship between creativity and figurative abilities. While previous research on this topic has yielded inconsistent results, it is expected that, for theoretical reasons and on the basis of some modest empirical evidence, there will be significant correlations between creativity as measured by the T.T.C.T. and at least some measure(s) of figurative ability. Specifically, significant correlations between the T.T.C.T. originality score, the M.T.T. comprehension and preference scores, and the novel figure production score are anticipated.

CHAPTER TWO

REVIEW OF THE LITERATURE

This chapter reviews most of the literature on metaphor relevant to the present study. In the first section some of the philosophical ideas underlying the study will be presented. Included will be the definitions of important terms, an overview of philosophical theories of metaphor, and a discussion of the important functions of language. The second section will focus on psychological research in the area of figurative language. This section will include a brief review of a number of studies on the development of figurative language abilities, and a more extensive discussion of research on figurative language within the context of counseling and psychotherapy.

I. Philosophical Background

Figurative or metaphorical language is a topic which has received a great deal of attention across a wide variety of disciplines. Psychology's interest in the area is a very recent phenomenon when compared with that of many other disciplines, it having developed only in about the last 20 years. In fields such as literary criticism, linguistics, semantics, and especially philosophy, figurative language in general, and metaphor in particular, have been the subjects of serious study for a very long time. Philosophers have been discussing the nature and functions of metaphor since at least the time of Aristotle, who was perhaps the first major thinker to write on the topic at length. A brief overview of philosophical thinking on metaphor follows.

A. Definition of Terms

Perhaps the most important term requiring definition at this time is 'metaphor' itself. There are almost as many definitions of metaphor as there are scholars who have studied it. The definitions vary considerably, primarily according to the context in which metaphor is being discussed. For the purposes of this study a fairly broad definition is desirable because the study is not interested in examining metaphor in the highly abstract and technical manner of philosophy. Nor does it occupy itself with the distinctions between metaphor, simile, analogy, metonymy, synecdoche, personification and other varieties of figurative language, that are important in the field of literary theory and criticism. Rather, the present study is concerned with the way that ordinary people use figurative language in general. Thus, the term 'metaphor' will be used in a generic sense throughout this thesis, and refers to almost all types of figurative language as they are normally used by people in a variety of conversational settings. The terms 'figurative language', 'metaphorical language' and 'metaphor' are, therefore, to be considered as virtually identical in meaning for the purposes of this thesis, and will be used interchangably throughout it.

A definition of these terms that is quite consistent with the above approach is Kopp's (1971). He defines metaphor as "a way of speaking in which one thing is expressed in terms of another, whereby this bringing together throws light on what is being discussed" (p.17). Gambell's (1976) definition of metaphor as "a figure of speech in which a word denoting one object or idea is used to add meaning to another object or idea through the similarities between the two" (p.15) is also appropriate. The most salient feature of the terms 'metaphor' or 'figurative language' as they will be used in this study, is that they involve some sort of comparison between essentially unlike objects, ideas, concepts, people, or situations.

Other terms which will be used frequently in this study, and thus which need defining are the terms 'novel' and 'frozen' figurative language. Novel figures will be defined for the purposes of this study as instances of figurative language which could be considered as relatively fresh, unique or original within the specific context of their occurrence. Frozen figures will be defined as those which, while metaphorical in the strict definition of the word, have become so common that they have lost any sense of being metaphorical, and are generally considered to be ordinary parts of the language. Thus, phrases such as the 'arm of a chair' or the 'leg of a piano' are frozen figures according to this definition.

B. Metaphor Theory

There are at least four or five principal theories of metaphor which have been developed by philosophers over the years. These theories are in conflict with one another over a number of issues, including whether or not all language is metaphorical, whether it is possible to translate metaphorical language into literal language without the loss of meaning, whether there are any fundamental differences between metaphor, simile, metonymy, synedoche, etc. and others. While these issues are important from the point of view of the philosophy of language, and have been discussed at length in the literature on metaphor, they are not directly relevant to the present study.

However, a number of other philosophical issues are of importance. These revolve around a set of related questions concerning whether metaphor is a fundamental aspect of language or merely an embellishment of it, whether metaphorical language can convey cognitive or just emotional meaning, and whether metaphorical speech offers a more precise or more vague manner of communication than does literal language.

Let us examine this set of questions in more detail. Historically speaking, there have been primarily two points of view on each of these questions. Hawkes (1972) characterizes them as the classical and romantic views of figurative language. The classical view, which has its roots in Aristotelean philosophy, is based on the notion that language is a means of revealing " the 'reality' of a world that lies, unchanging, beyond it" (Hawkes, 1972, p.90). According to this view, literal language is the only type that offers precision and clarity of meaning, and is therefore the only type suited for describing the 'bare facts' of reality. Figurative language, on the other hand, is viewed as a mere ornamentation of language, which could be done away without diminishing the language's ability to convey 'real' meaning. Its utility is limited to the arts of rhetoric and poetry which it helps to make interesting and enjoyable. Like the seasoning in meat, figurative language can add flavor, charm and distinction to communication, but adds nothing substantial to its content.

In opposition to this view is the romantic view, which rests on a conception of language and reality that is fundamentally different from that of the classical view. Instead of seeing language as describing an objective reality, the romantic view sees reality as being created via the interaction between language and the 'bare facts' of the world. Figurative language is regarded as

> inseparable from a language which is vitally metaphorical, and a reality which is ultimately the end product of an essentially metaphorical interaction between words and the 'hurrying of material' that they daily encounter. Metaphor, deliberately invoked, intensifies language's characteristic activity and involves quite literally, the creation of 'new' reality (Hawkes, 1972, p.90).

According to this view, metapohorical language is not just 'embroidery' on the facts of the world; instead it "is a way of experiencing the facts. It is a way of thinking about living; an imaginative projection of the truth" (Hawkes, 1972, p. 90).

The classical and romantic conceptions of language represent, of course, two extreme positions, and there is a large middle ground between them. A point of view which combines them nicely, and which is consistent with the approach taken in the present study, is referred to as the 'double-language' thesis (Beardsley, 1967). According to this view

> there are two fundamentally different forms of language, the literal and the metaphorical, and...while the former is suited to the expression of empirical truths, the latter alone is capable of expressing transemprical, intuitive truths (Beardsley, 1967, p. 287).

Why this might be the case is a matter to be addressed in the next section.

C. Characteristics and Functions of Figurative Language

Metaphorical language performs a variety of functions within our language. At the most basic level it provides a means of communicating things that are difficult to communicate. Through the use of metaphor, the highly abstract is expressed in terms of the concrete, the unfamiliar in terms of the familiar, the unknown in terms of the known. As Brown (1966) notes, "metaphor...is in its origin an attempt to express in terms of experience thoughts lying beyond experience" (p.13). Altick (1960) makes a similar point when he characterizes the role of figurative language as that of "making the abstract comprehensible in terms of ordinary experience, and of explaining the seemingly mysterious in everyday language" (p.245). In performing these functions, metaphorical language adds both breadth and depth to language.

> Metaphor is a convenient, extraordinarily flexible and capacious device for extending the resources of language, by creating novel senses of words for particular purposes or occasions (Beardsley, 1967, p. 286).

Thus, through metaphor the language is broadened by the creation of new terms or of new uses for existing terms. In addition, metaphor adds finesse and depth to language by "bringing out a new aspect or showing a new way of feeling concerning something already describable in the language" (Henle, 1958, p. 189).

We have seen that one of figurative language's characteristics is that it is able to communicate some ideas better than literal language, and that, in doing so, it serves to expand language. However, many take this a step further and claim that metaphorical language has the ability to express some information, ideas and experiences that cannot be expressed in any other way. For example, Shibles (1971a) asserts that "the only way through which certain aspects of experience can be expressed is by means of metaphor" (p. 32). Tomkins (1968) states that "metaphor is seen not merely as the clearest, most precise language available, but frequently as the only language available for the transmission of some ideas" (p. 18). Ortony (1975, 1978) points out that "some things by their nature are not describable" (1975, p. 49), yet affirms that "one of the functions of metaphor must be to permit the communication of things that cannot be literally expressed" (1978, p.925). Others make similar claims (Brown, 1966; Harries, 1978; Henle, 1958; Mooij; 1976).

If the above claims are true, what sorts of things are best expressed figuratively? Literal language is usually sufficient for communicating cognitive information, but as Brown (1966) points out

> ideas are not the whole of what we wish to express by speech. A side of our personality other than the intellectual constantly seeks expression, the emotional side, the side of feeling (p. 88).

As we all know from our own experience, it is often very difficult to express our emotions in 'normal' words. Often we overcome this problem by using some sort of figurative expression to convey our feelings to others. Metaphorical language seems to capture and communicate our emotional experiences better than any other type of language. "It may be said that at times through metaphor alone can a given emotion find adequate and, so to speak, precise expression" (Brown, 1966, p. 88). Interestingly, most of the words or expressions that are commonly used to refer to our internal states are metaphorical in nature. (Shibles, 1974, p. 31). That figurative language is the best, if not the only means of expressing our emotions and other highly subjective aspects of our experience verbally is a point made by many writers on the subject (Booth, 1978; Embler, 1966; Haley 1976; Mooij, 1976; Ricoeur, 1978; Rubinstien, 1972; Scheffler, 1979; Shibles, 1974).

Another characteristic of figurative language that distinguishes it from literal language is that it seems to provide a different manner of communication, one that is more vivid and wholistic due to its ability to present sensual, cognitive and emotional information vividly and simultaneously. As Myers (1968) notes,

> if our aim is to help someone understand what something is like as a whole and grasped all at once, we often come much closer to our objective by using a perspectival metaphor than by ordinary literal description. The latter gives the object piecemeal with the gestalt lost while the former gets closer to the gestalt by directly presenting the organizing icon. (p. 65)

In addition, metaphorical language provides a more direct, intuitive form of communication because it communicates through pictures and images rather than through propositions. While literal language operates by analyzing, defining and describing experience, figurative language "sets the scene before our eyes." (Aristotle, cited in Ricoeur, 1978, p. 34) It presents experience directly, it "serves to put the hearer in a position to explore and find out new things...it allows him to look rather than describing for him what there is to see" (Myers, 1968, p.163). In other words, metaphor "serves as an 'analogue' or substitute for direct experience" (Hisamoto, 1975, p. 68) in that it provides a means for one person to communicate his experience to another in such a way that the other actually 'sees' and 'feels' it for himself. As Hisamoto (1975) points out, metaphorical language "give(s) the metaphor receiver a vicarious experience" (p. 71)

Another characteristic of figurative communication that is closely related to the above concerns the manner of its comprehension by the hearer. It is generally agreed that reason plays a much smaller, and intuition a much larger role in the comprehension of metaphorical communication (Haynes, 1975; Scheffler, 1979; Shibles, 1971a). Shibles (1971a) suggests that the metaphor is "grasped immediately or intuitively before any step by step analysis" (p. 66). Its intuitive quality, combined with its unique ability to communicate the highly subjective aspects of our experience, and to do so in a vivid, direct and wholistic manner, makes figurative communication qualitatively different from literal communication, and very useful within the context of counseling (Gordon, 1978; Myers, 1968; Ortony, 1975, 1978).

As well as being particularly well-suited to communicating emotional experience, metaphorical language also provides an effective means for expressing an individual's view of the world. Many psychologists believe that people think, feel, and act in the world not on the basis of 'objective' reality, but rather on the basis of their perceptions and interpretations of reality. They claim that as we live through our life experiences, we construct a set of beliefs about ourselves, others, and the world around us, that this 'personal theory of reality' acts as a lens or filter which 'screens' our perceptions of reality, and that it is thus responsible for most of our thoughts, feelings, and actions. This set of beliefs, attitudes, perceptions, interpretations, expectations and understandings is referred to as a lifestyle (Adler, 1965), a personal construction system (Kelly, 1955), a perceptual field (Combs, Richards and Richards, 1976), a world image (Watzlawick, 1978), and as a representation or model of the world (Bandler and Grinder, 1975). Regardless of what it is called, however, this view of the world is an incredibly complicated creation. Watzlawick (1978) refers to it as "the most complex synthesis of the myriads of experiences, convictions, and influences, of their interpretations, of the resulting ascription of value and meaning which an individual can muster" (p. 43). It is also highly individualistic. While some aspects of people's 'world-views' will be similar, due to the common experiences they share from living in the same culture, other aspects may differ radically because of the differences in their individual experiences or in their reactions to them. Because no two people share exactly the same life experiences, each person's view of the world will be unique in many ways.

It is not hard to see why communicating one's world-view to others can be a very difficult task. In the first place, most people are unaware that they even have one, that they see the world through the 'lens' of their world-view. Those who are aware of it are often unsure of the nature and characteristics of their world-view. And even those who seem to have a good understanding of their view of the world have a difficult time trying to express it to others because of its complexity and abstractness.

It is impossible for anyone to communicate fully to another all aspects of his world-view. In spite of this fact, however, many authors claim that through figurative language it is possible for an individual to express the most salient features of his world-view to others. That figurative language is an effective means for expressing an individual's world-view may be partially accounted for by the fact that it is able to convey a number of different types of meaning (i.e. sensual, perceptual, cognitive, emotional) simultaneously. All of these are important elements of people's world-views. However, metaphorical language has another characteristic that may be even more important in the communication of world-views: it organizes perception. What is meant here is that when we refer to one thing (A) in terms of something else (B), we tend to highlight certain aspects of 'A', (namely those aspects that it has in common with B) and downplay or ignore other aspects of 'A' (those aspects that make it different from B). Thus, when we refer to 'A' in metaphorical terms, our perception of it is determined to a great extent by the metaphor we see it in terms of. The process that takes place here is practically identical to that which takes place when people see the world around them in terms of their personal view of the world. In the same way that a metaphor organizes our perception of the object it refers to, our personal world-view organizes our perceptions of the world around us. Both metaphors and world-views act as screens or filters through which we see what we are looking at. Our world-view can be seen as our model of the world, and as Shibles (1974) notes, both "metaphors and models partially determine how and what we actually see and observe. We see things in terms of our models, just as when we wear blue glasses, the world becomes blue" (p. 25).

One possible reason why metaphorical language is able to express individuals' world-views so well may thus lie in the fact that the processes involved in metaphorical communication and in people's perception of the world through their world-view are so similar. However, I would like to take this argument a step further and propose that people's views of the world may actually consist of a number of related metaphors through which they interpret and understand the world. Some of these the individual shares with those around him (cultural metaphors), while others he has developed himself on the basis of his own experience of the world. While this suggestion can only be speculative at the present time, it does offer a way of understanding more clearly the nature and functioning of individuals' views or models of the world, one that has occurred to others as well. For example, Hawkes (1972) refers to "the existence of different perceptions of reality brought about ultimately by differences in metaphor" (p. 81). Hisamoto (1975) writes that "the metaphors that are produced by an individual or by a culture should be considered manifestations of how an individual or culture interprets the surrounding environment" (p. 79).

If there is any substance to the above suggestion, then it is clear that the primary reason that metaphorical language is an effective means for communicating people's world-views is that those world-views are themselves vitally metaphoric in nature, and thus best communicated metaphorically. Indeed, the metaphors that people use when expressing their world-views may be the very ones that constitute them, a notion that, if true, would have some interesting implications for counseling, which will be explored later in this chapter.

In any case, it is fair to say that whether we are attempting to express our emotions, our personal way of seeing the world, or some other highly subjective aspect of our experience, figurative language often provides a more effective means of doing so than literal language does. In its ability to convey feelings, to present perceptual, cognitive and emotional information simultaneously and wholistically, and to capture individualistic modes of perceiving and understanding the world, metaphorical language far surpasses literal language. These qualities make such language relevant to psychology in general, and to counseling psychology in particular.

In this section the important terms to be used in the present study were defined. The classical and romantic views of figurative language were also examined, and a position on the nature of such language was taken in which it was seen as a special kind of language especially well suited to the communication of transempirical information. A number of functions and characteristics of metaphorical language were also discussed. Metaphor serves to broaden and deepen language, and also provides a means of expressing what might otherwise be inexpressible. Figurative language was viewed as being superior to literal language with regard to the communication of subjective experience, and especially of emotions. It was also characterized as a mode of communication that is more vivid and wholistic, as well as more direct and intuitive than is literal communication. In addition, it was pointed out that people think, feel, and act on the basis of an individual view of the world, and that metaphorical language is an effective means for communicating this world-view, because of similar processes underlying metaphorical communication and the understanding of reality through personal world-views. Finally, it was suggested that metaphors may actually be important components of such world-views.

Now that these philosophical matters have been considered, their relevance to counseling will be briefly examined. The most important point to note in conjuction with this is that figurative language has a number of special communicative characteristics that are pertinent to the counseling process. In any form of counseling it is important that the counselor gain a clear understanding of the client and of the experiences that have brought him to seek help. The client must somehow explain to the counselor who he is and the nature of his experiences. This often involves an attempt to express emotions, some of which are very intense. The communication of highly subjective, emotional, and personally meaningful thoughts and feelings is frequently very difficult for people, as anyone who has counseled others knows. Because of the special abilities outlined above, figurative language can provide an effective means for communicating those aspects of our experience.

A number of schools of counseling stress that in addition to understanding the experiential and emotional world of the client, it is critical that the counselor gain an understanding of the client's personal view of the world. This would apply to any of the phenomenologically oriented schools of counseling that emphasize the important effect that the individual's world-view has on his experiences, including Rational - Emotive Therapy, Transactional Analysis, Gestalt Therapy, Adlerian or Individual Psychotherapy, Cognitive - Behavior Therapy, Neuro-Linguistic Programming, and others. Gordon (1978) sums up the point of view of these therapies nicely:

> A primary focus of therapy has always been the attempt of the therapist to understand the clients' model of the world. Towards this end the therapist asks the client to describe in detail his experiences regarding the problem under discussion. The underlying assumption is that if the therapist is going to help the client change, the therapist must first understand how the client presently hears, sees, and grasps the world. (p. 11)

As was mentioned earlier, figurative language may be an appropriate and effective means through which the therapist can come to an accurate understanding of the client's world-view.

Finally, metaphorical language may have important therapeutic functions in addition to the communicative functions just outlined. If "the purpose of therapy is seen as a change of the patient's... world image" (p. 128), as Watzlawick (1978) proposes, and if metaphors are important constituent elements of people's world-views, as was suggested earlier, then it is possible that one way to help clients change non-productive aspects of their world-views would be to replace the metaphor or metaphors that make them up with ones that are more suitable. In this way metaphor and other forms of figurative language may have therapeutic benefits in counseling. This notion will be dealt with later in this chapter, but first we shall turn to a more general examination of the psychological literature on figurative language.

II. Psychological Research

In this section relevant psychological research on metaphor will be reviewed. Research into the developmental aspects of figurative language competence will be briefly outlined first, followed by a discussion of the literature on the role of such language in counseling and psychotherapy. Finally, a number of studies that are directly relevant to the present one will be examined.

A. Developmental Studies

By far the largest portion of the psychological literature on this topic is concerned with the development of figurative language competence in children. While it is not necessary to look at all of this literature in depth, a brief overview of the nature and results of the developmental research is useful.

Within the last five years four excellent reviews of the literature on the development of metaphoric competence have been published (Billow, 1977; Ortony, 1978; Pollio et al., 1977; Pollio & Pickens, 1980). Most of the research in this area has focused on the development of different types of metaphoric abilities in people from preschool age through college age. The original study of metaphoric competence by Asch and Nerlove (1960) concentrated on children's ability to understand and explain the meanings of double-function terms (i.e. figurative terms that had both a physical and psychological referrent). This study concluded that children were not able to master and explain fully the reasoning behind such figurative terms until they were about 11 years old. Because of this finding, it came to be generally accepted that figurative competence did not develop until early adolescence, until other researchers began studying the phenomenon in greater detail. Some of these researchers focused on children's and adolescents' production of figurative language, mostly using written tasks (Gardner, 1974; Gardner, Kircher, Winner & Perkins, 1975; Pollio & Pollio, 1974; Schonberg, 1974). Other reseachers examined children's preferences for metaphorical as opposed to literal endings to incomplete simile stems. (Gardner et al., 1975). Still others concerned themselves with children's comprehension of figurative language (Billow, 1975; Gardner, 1974; Pollio & Pollio, 1979; Winner, Rosenstiel & Gardner, 1976). Another group directed its efforts towards clarifying the developmental trends in regards to Asch and Nerlove's (1960) original task - the explication of metaphoric comprehension (Billow, 1975; Gardner, 1974; Winner et al, 1976). Finally, a number of studies have been done which investigate simultaneously the same children's performance on a number of different metaphoric tasks (Billow, 1975; Gardner et al., 1975; Pickens & Pollio, 1979; Pollio & Pickens, 1980; Pollio & Pollio, 1979; Pollio & Smith, 1980; Winner et al., 1976).

This research has improved our understanding of the development of metaphoric competence considerably. While Asch and Nerlove's (1960) finding that children cannot explain the rationales for figurative expression before early adolesence was confirmed (Billow, 1975; Malgady, 1977; Winner et al., 1976), it was discovered that metaphor production, preference and comprehension occur at a much earlier stage of development. Children as young as three and a half to four years old can and do produce metaphorical language, both spontaneously in their everyday speech and when asked to do so in an experimental situation (Gardner, 1974; Gardner et al., 1975; Pollio & Pickens; 1980). The production of spontaneous metaphorical expressions appears to decrease in written expression during the early school years, and then to increase again during adolesence (Gardner et al., 1975; Pollio & Pickens, 1980; Pollio & Pollio, 1974; Schonberg, 1974).

There have been very few attempts to examine the use of figurative language in natural speaking situations, in spite of the fact that some researchers have suggested that a spoken task would more accurately assess people's figurative capabilities than have the written tasks that have been traditionally used in research (Pollio & Pollio, 1974). This suggestion is based on the notion that a speaking task might eliminate some of the linguistic restraints associated with written compositions. One study that used both written and spoken tasks found that this was indeed the case; children exhibited more spontaneity, feeling and ingenuity, and used more figurative language on the oral task (Holstein, 1970).

There is then, some empirical evidence suggesting that a spoken task may provide a more appropriate method of examining people's natural pattern of figurative language usage than does a written task. This was one of the reasons why a spoken task was chosen for the present research. There is, however, an even more important reason. Because the results of this study are intended to generalize to counseling, it is important that the tasks used involve not only topics analogous to those commonly discussed in counseling, but also the medium through which counseling is most often conducted. As speech is the primary medium of counseling, it was thus important that the present study use an oral, interview type format analogous to that used in counseling. In doing so we are not only ensuring the generalizability of the results to counseling, but are also heeding Pollio and Smith's (1980) call for research into figurative language which places the speaking person at the very center of its concerns.

As to research on the comprehension and explication of metaphorical language, it has been found that comprehension seems to occur later than production, but sooner than the ability to explain the rationale behind figurative expressions. There also appears to be a certain developmental sequence that children go through in the development of the capacity to understand and explain figurative language (Billow, 1975; Cometa & Eson, 1978; Pollio & Pickens, 1980; Pollio & Pollio, 1979; Winner et al., 1976).

In addition to the developmental trends outlined above, research using a variety of figurative language tasks with the same subjects has found that people tend not to perform equally well on all tasks (Chapman, 1971; Gardner, 1974; Gardner & Winner, 1978; Pickens & Pollio, 1979; Pollio & Pickens, 1980; Pollio & Pollio, 1974, 1979; Pollio & Smith, 1980; Winner, 1976). This finding has led reseachers to propose that metaphorical competence is not a unitary domain. For example, Pickens and Pollio (1979) have suggested that the assumption that one cognitive act lies at the heart of metaphoric compentence may be in error, and that we thus "seriously consider the possibility that different tasks represent not so much variations on a single act, but discriminably different cognitive activities" (p. 310). Pollio and Smith (1980) have made the same point. A recent factor-analytic study has suggested that while a global metaphoric ability might exist in the elementary school years, the structure of this general ability changes "to a set of highly differentiated competencies involving each task as a separate, essentially unrelated entity" (Pollio & Pickens, 1980, p. 337) around grades six to seven. There is some evidence to suggest that these highly differentiated metaphoric competencies may reintegrate to a certain degree, and become more highly and hierarchically organized during the college and adult years (Pickens & Pollio, 1980; Pollio & Pickens, 1979), though this finding is much less well established than the previous one.

The likelihood that figurative language competence does not depend on a unitary cognitive process has led a number of researchers to stress the importance of using more than one measure of figurative language when doing research in the area. "An exclusive use of one procedure can hide certain important aspects of figurative competence" (Pollio & Smith, 1980, p. 384). As Pollio and Pickens (1980) point out, "multi-dimensional domains require multi-dimensional probes, and in this, figurative language is no exception" (p. 338). For these reasons, two different measures of figurative competence are included in the present study. Doing so allows the study to examine the relationship between the different figurative abilities measured to see if it is consistent with the conception of figurative language as a multi-dimensional domain. It also provides an opportunity to investigate the relationships between both of these measures and that of a third variable: divergent thinking.

B. Figurative Language and Psychotherapy

Figurative language has been a topic of interest within counseling and psychotherapy for about four decades. In this section we will examine the role of such language in therapy, first of all as it is viewed by therapists of a psychodynamic persuasion, and then as seen by other schools of psychotherapy.

1. Psychodynamic perspective - I was able to locate 15 journal articles spanning some forty years that represent the psychodynamic view of figurative language. While there are differences between some of the ideas expressed in these articles, there are also a number of themes that they share, and that distinguish them as psychodynamic in outlook.

One notion that all of these articles have in common is that "unconscious processes are always present in production and understanding of metaphor" (Pollio et al., 1977, p. 105). Metaphorical expressions are viewed as being unconscious in origin, and because of this, their true meanings are always hidden below the surface. Like dreams, free associations, responses to projective tests and other expressions of our unconscious, their meaning must be ferreted out by the process of psychodynamic interpretation (Barish, 1977; Knapp, 1960; Lewin, 1971; Rubinstien, 1972; Voth, 1970). Through analysis and interpretation it can be discovered that people's figurative language actually serves to express a variety of repressed psycho-physical ideas, emotions and experiences (Billow, 1977; Sharpe, 1940). Metaphorical expressions may, at their deepest levels, be representations of oral, anal and urethral experiences (Rubinstein, 1972; Sharpe, 1940), or repressed oedipal wishes (Sharpe, 1940), or a number of other bodily or sexual conflicts (Lewin, 1971; Reider, 1972). Other writers see figurative expression as a form of displacement, as a means of expressing primitive and intense primary process thinking at a safe, secondary process level (Barish, 1977; Cain & Maupin, 1961; Caruth & Ekstein, 1966; Ekstein & Wallerstein, 1957; Peake, Van Noord & Albott, 1979). Such expressions are thus defensive in nature; they provide a patient "with some necessary emotional distance from the underlying unconscious thoughts, feelings, fantasy formations, and conflicts", while at the same time providing "an opportunity for discharge, expression, and communication of these underlying feelings and thoughts, however hidden" (Barish, 1977, p. 233). By allowing the expression of repressed ideas and affects while hiding their original sources, figurative language acts as a defense mechanism (Billow, 1977). Such language thus provides a person with a sort of alibi, "a way of implying what he wants to communicate without actually committing himself, a way of simultaneously keeping and revealing a secret" (Caruth & Ekstein, 1960, p. 38).

It is obvious from this brief overview that psychodynamic theorists have a basically negative view of figurative language. While it may have some positive uses, for example, to establish and maintain communication with schizophrenic or borderline patients (Cain & Maupin, 1961; Caruth & Ekstein, 1966; Ekstein & Wallerstein, 1957), it is generally used by people to conceal rather than to reveal information about themselves. However, as Pollio et al, (1977) point out, recent developments in psychodynamic theory may result in a more positive approach to metaphorical language. The gradual shift in psychodynamic theory from a primarily biological model towards a more psychological one has resulted in a greater emphasis on "the central role of the ego in mastery, executive functioning, and in psychotherapy" (Pollio et al., 1977, p. 113), which has resulted in a more positive view of the individual's ability to cope adequately with his instincts. One consequence of this theoretical shift is that, at least in some circles, metaphoric expressions "can be viewed not only, or even primarily, as signals to repressed conflicts, but as the person's best, present attempts to resolve the conflict" (Pollio et al. 1977, p. 113). An article by Wright (1976) presents this perspective quite clearly. He claims that metaphorical language "throws light on the creative, integrative functions of the ego" (p. 98), that it "is a product of an ego that is going towards a problem and attempting to grasp it." (p. 98), and that the creation of a metaphor can help to undo symptoms. This positive approach to figurative language is more in line with the point of view of the present study, as well as with that of most non-psychodynamic theorists and researchers who have examined the role of such language in psychotherapy.

2. Non-psychodynamic perspective

There are two main approaches to the use of figurative language in counseling in the non-psychodynamic literature on the topic. Some reseachers have focused on the client's use of such language, while others have directed their attention towards its use by the counselor as a tool of therapy. The literature associated with each of these points of view will be reviewed in turn.

a. Client's use of figurative language - When talking about themselves in a counseling setting people use figurative expressions quite frequently. Pollio et al. (1977) synthesized the results of three studies on the use of figurative language in psychotherapy sessions, and found that between them the client and the therapist produced from 1.26 to 3.07 novel figures, and from 1.41 to 4.01 frozen figures per 100 words. It is, thus, fair to say that metaphorical language is used extensively within the context of psychotherapy.

This fact has been explained in a number of ways. Fine, Pollio and Simpkinson (1973) have suggested that in therapy a patient often feels a discrepancy between what he is actually experiencing or feeling, and what he is able to communicate about these to the therapist. This discrepancy may occur because the vocabulary available to the patient is insufficient to express the meaning he wants it to, or may be due to the patient's not having sufficient conscious awareness of his experience to find words to fit it. In either case, a patient will often use figurative expressions in an attempt to fill the gap between his experience and the words available for expressing it. Through the use of imagination and intuition, patients will often discover some metaphorical expression that bridges this gap.

Metaphorical language thus serves "to capture and concretize affective experiences...by relating them to observable behaviors and events" (Barlow, Pollio, & Fine, 1977, p. 214).

Simpkinson's (1972) study also sees metaphorical language as an important means of communication between client and therapist. This study examined the role of such language in a set of psychotherapy sessions conducted by two therapists. One of these had no knowledge of the purpose of the study, and thus did not pay special attention to the figurative language that occurred in his sessions; the other therapist did know about the study and consciously attended to the figurative language that occurred. When all of the sessions were complete, their transcripts were analyzed, and it was found that "when a therapist attends to the patient's and his own metaphoric usage... the therapeutic function of metaphor in being the vehicle of subjective and intuitive communication is enhanced" (p. 3962).

Haley (1976) is another who emphasizes the importance of non-literal language in counseling and psychotherapy. He makes a distinction between digital language, in which each statement has a specific referent and only that referent, and analogic communication, which deals with resemblances between processes and involves language where each message refers to a context of other messages. Analogic communication often involves figurative language. Haley points out that digital language may be appropriate for the discussion of the relationship between man and his environment, but that it "begins to be problematic when it is applied to human beings dealing with one another" (p. 83). He goes on to say that the language of human interaction, and thus the language best suited for counseling, is analogic language.

Some writers have commented that figurative language is a useful tool of communication in group as well as in individual counseling. For example, Davis and Sandoval (1978) found that metaphorical expressions were frequently used in mental health groups to communicate individual or group concerns when a more direct form of communication was felt by group members to be difficult or uncomfortable. These authors defined metaphor as "a communication from the consultee(s) to the consultant in which thoughts and feelings about an emotionally charged situation have been transferred to an analogical situation that preserves the original dynamics" (p. 374). By providing a safe means for discussing issues that were of concern to group members, but that were too risky to be dealt with openly and directly, metaphorical language stimulated the group members to communicate about and work through those issues. That such language often provides a safe way of talking about issues "when discussion of the actual referent is dangerous to the patient or to the therapist" (Goldiamond & Dryud, 1968, p. 80) is a point that has been made by a number of writers (Barlow et al., 1977; Fine, Pollio & Simpkinson, 1973; Goldiamond & Dryud, 1968).

So far in this discussion, we have been stressing the important communicative role that metaphorical language can play when used by clients in counseling settings. However, many psychologists have taken this idea a step further by suggesting that the use of such language might actually have therapeutic effects. For example, Gore (1977) found that patients who used highly creative metaphors in psychotherapy also evidenced approach rather than avoidance tendencies in therapy, indicating that they were more open to self exploration than those who used few or less original metaphorical expressions. He concluded that "metaphor has some impact as a psychotherapy process variable" (p. 2861).

Fine et al. (1973) have proposed that figurative expressions enable individuals to draw upon and help clarify feeings and impulses that are currently out of their awareness. A similar point is made by Barlow et al. (1977) who observe that "metaphor provides an inroad to unconscious impulses and feelings" (p. 214), and thus helps clients reach a higher level of self-awareness. Both Fine et al. (1973) and Barlow et al. (1977) also suggest that metaphors offer alternative cognitive models which act as teaching-learning devices for the patient and the therapist alike, and which can help both of them gain new insights into the patient's thoughts and feelings.

The relationship between insight and metaphorical language in psychotherapy has been examined in depth by Barlow (1973), Barlow et al. (1977), Pollio and Barlow (1975), and Pollio et al. (1977). In a behavioral analysis of figurative language in a single session of Gestalt therapy, Pollio and Barlow (1975) found that figurative language played a significant role in bringing about a dramatic insight for the client. The analysis of this psychotherapy interview uncovered three 'acts' into which the session could be broken. The first act was dominated by the client conversing in a literal manner about her thoughts and feelings. In the second act there was a dramatic shift from literal to figurative expression, which was in response to the therapist's request that she attempt to speak and behave in a non-literal manner. In the third act the therapist encouraged her to return to the literal mode, and to discuss the insight she had gained in the second act in relation to the demands of her real life situation. The authors explained the role of metaphorical language in this session by referring to Gordon's (1961) synectics theory, which proposes that the problem solving process operates by making the familiar strange or making the strange familiar. In the psychotherapy session metaphorical language facilitated both problem-setting and problem-solving by casting the client's familiar problem in an unfamiliar light, enabling her to see it in a new and different way. Once this was accomplished she was able to move into a discussion of the demands of her day-to-day life, but with a new insight into her problem. Figurative language thus functioned as a therapeutic hueristic in this instance. The authors concluded this study by noting that the use of figurative language in psychotherapy

> provides not only a playful heuristic capable of springing a momentarily blocked patient, it may also provide a key to the patient's way of looking at and understanding his or her world. No less than the poet, patient metaphors tell us a good deal more about the patient than could probably be articulated in any other way. Because of this they are diagnostic and therapeutic tools par excellence (p. 254).

The previous authors, together with Fine, also examined the relationship between insight and figurative language in a more recent study (Barlow et al., 1977). In this study they examined two more case studies of individuls in psychotherapy sessions to determine the patterns of insight and figurative language. Initially they noticed the parrallel occurrence of a large number of figurative expressions and the patients' realizing some new insight. In order to determine the degree to which these were related, they analyzed the transcripts of one of the case studies in greater depth. The Barlow, Kerlin, and

Pollio (1971) procedure was used to identify figurative language, and four experienced psychotherapists were used to judge the occurrence of insight. A communication unit was considered to contain an instance of insight if three or more judges independently rated it so. Four such instances of insight were found in the interview, all of which followed upon the highest rates of novel figure production, and which coincided with the only sustained high rate of metaphoric activity in the interview. Correlational analysis found that novel figures correlated .42 ($p < .07$) with insight, indicating that, in this session, novel figurative language often occurred in proximity to insight. A different statistical treatment of the data using Fisher's exact test yielded an even more significant relationship between novel figures and insight. No such relationship was found between frozen figures and insight. The study concluded that "in general terms... novel figurative language co-occurs with insight, whereas frozen figurative language does not" (p. 220). Upon further examination of this case study, it was discovered that there were, in fact, two patterns of relationship between novel figurative language and insight. One was the simple pattern of co-occurrence outlined above, while the other was an alternating pattern in which "literal statements indicating insight follow upon high frequencies of novel metaphor, which in turn trigger new bursts of metaphoric activity" (p. 221). Both patterns support the notion that figurative language may be helpful in bringing about therapeutic insight.

The relationship between metaphorical language and insight in psychotherapy was also investigated in detail in Barlow's (1973) doctoral dissertation. He randomly selected five interviews from a set of over 400 interviews of a complete and successful case of psychoanalytic psychotherapy, and analyzed these interviews for the occurrence of figurative language and insight, using the procedures mentioned earlier. The results of both quantitative and qualitative analyses are reported in Pollio et al. (1977, Chapter 6). They indicated patterns of relationship similar to those discussed above. Specifically, it was found that "insight in psychotherapy occurs within the context of highly novel figurative expressions and within literal declarative statements" (Barlow, 1973, p. 1268). In those situations where insight was found to not occur directly along with novel figurative expressions, it did tend to occur on either side of the highest rates of novel figure production in all interviews. The literal expressions which indicated insight thus usually followed closely upon, and were explications of a preceding figurative statement. Barlow concludes that "the process of insight, then, at least in 'talking psychotherapy' is had by verbalizing implicit experience in novel figurative expressions and then by describing the implications of these expressions" (Pollio et al., 1977, p. 157).

In examining the function of figurative language in psychotherapy it has become apparent that such language may indeed play a significant role in the therapeutic process. Figurative expressions help individuals to convey to others thoughts and feelings that are otherwise difficult to communicate. They provide a safe way of discussing uncomfortable and difficult issues. They may also have some therapeutic effects. Metaphorical language can help individuals become conscious of and to clarify thoughts and feelings that are beyond their awareness. Metaphors can function as teaching-learning tools as well, and can thus help individuals come to know and understand themselves better. There is also some evidence that figurative language is related to the process of therapeutic insight.

While all of the functions of figurative language mentioned above seem conceptually sound, they seem to me to be based on an assumption that has never been tested—namely, that people use such language differently within the context of counseling or psychotherapy than they normally do. That is to say, the studies discussed above imply that there is something about the experience of talking about oneself in counseling that results in people's resorting to figurative language more frequently than they do in normal conversation.

While a few studies have addressed this issue indirectly, none has focused on it specifically. Chapman (1971) found that a 'Peak Experience Essay' was successful in eliciting written figurative expressions, the implication being that people were forced into the figurative mode to describe such extraordinary life experiences. Schonberg (1974) discovered that adolescents used more novel figures on written tasks that had a subjective focus than on those with an objective focus. In a study of children's figurative language production, Gamble (1976) found that the type of stimulus, or 'topic', used to elicit oral responses was the most significant factor in the amount of figurative language produced; an abstract stimulus elicited more and higher quality figures than did a concrete one. Though these three studies provide some support for the notion that topic has a significant effect on the amount of figurative language produced in certain communication situations, none of them approaches the main issue directly. It is to test empirically the assumption that people use more figurative language in a counseling (or counseling-type) situation than in ordinary conversation that is the primary purpose of this study.

b. Therapist's use of metaphorical language - We have examined some of the literature related to the functions of metaphorical language as used by the client in psychotherapy. There is also a considerable body of literature which is concerned with the use of figurative language by the therapist as a therapeutic technique. Because the present study focuses on the client's use of such language, this body of literature will not be reviewed in as much detail as was the last. However, it is interesting to note what various writers have said about how metaphorical language can be used as a tool of therapy.

For example, Fine et al. (1973) point out that "therapists often have an understanding of some condition or situation which they cannot communicate in ordinary, literal ways" (p. 88), and go on to explain that figurative language often provides an effective way of communicating this understanding to the client. Pollio et al. (1977) have determined that experienced psychotherapists are more sensitive to, and use more figurative language than less experienced therapists.

Others have emphasized metaphorical language's ability to bring about change in a client's way of perceiving himself and his world. Peake et al. (1979) propose that in psychotherapy the therapist is involved in allowing, encouraging and even forcing the patient to develop new metaphors as alternatives to the old. They explain that the process of replacing an old metaphor with a new one results in the old mental-emotional set being swept away and superseded by a new gestalt that provides a new way of perceiving both old and new facts. Others claim that bringing about a change in clients' metaphor(s) can also bring about a change in their attitudes (Lenrow, 1966) and in their cognitive models (Barlow et al. 1977). Haley (1976) concurs with all of these authors, and goes so far as to assert that "all therapists, whatever their schools, are attempting to change a metaphor" (p. 92). He goes on to say that various forms of therapy can be described as ways of responding to the analogies of the patient in such a way that the analogies change." (p. 99), and proceeds to demonstrate how a number of different types of psychotherapy use metaphorical language in their attempts to facilitate therapeutic change.

Olson and Meyers (1972) describe how they have used figurative language therapeutically in group counseling. While working with a group of acting-out adolescents, one of the therapists suggested to a group member who was withdrawing from the others that it seemed as if he had built a moat around himself. This metaphor prompted a number of the group members to respond both verbally and non-verbally to the withdrawn member in ways which derived from the moat metaphor. After this incident a discussion followed in which group members shared with one another the various ways in which they related to other people, with the metaphors of moats, bridges and walls forming a large part of the discussion. This proved to be a very therapeutic event in the life of this group. Lenrow (1966) cites other examples of how metaphorical language has been used in human relations training and therapy groups.

In one of the earliest articles to appear on the use of metaphor in counseling and psychotherapy, Lenrow (1966) discusses seven important functions of metaphor:

> 1. the use of metaphors by the psychologist in communicating with the client may (if not overworked) provide a model of willingness to try out novel ways of looking at behavior....
>
> 2. metaphors function to simplify events in terms of a schema, or concept, that emphasizes some properties more than others....metaphors may be particulary useful for highlighting an aspect of a client's mode of behavior that has heretofore been overlooked or deemphasized....
>
> 3. the concrete referents of metaphorical language give such communications an intimate or personal quality.... The fact that one referent of every metaphor is highly concrete results in a communication that is intimate by implying that the speaker and the listeners share specific common experiences....
>
> 4. metaphors have a half-playful, half-serious quality that permits the therapist to communicate about intimate characteristics of the client without appearing as intrusive as a more conventional mode of describing the client might appear.... This permits the psychologist to communicate about important aspects of the client's behavior while ostensibly talking about a class of events very different from the client....
>
> 5. the form of metaphor is especially well-suited for asserting the affective equivalence of apparently dissimilar concepts or events.... Because metaphors equate two referents that are highly dissimilar, they provide a therapist with an economical form for summarizing his impressions about a way in which his client treats diverse events as affective equivalents. An apt metaphor may permit the client to observe his own ways of equating situations and thus open possibilities of dealing with the situations as different in important respects....

6. metaphors...are well suited to highlighting subtle social roles that a client takes.... Metaphors can thus provide a client with concepts—personally relevant, anchored in concrete experiences, simplified, and half-playful—that characterize his modes of relating to others.... In this way metaphors condense and make vivid the person's apparent view of his lot in life....

7. metaphorical concepts, once learned, are likely to transfer readily to new situations that the person enters or old ones that he reenters.... Because metaphors ignore many features of a situation in simplifying it, and because they refer to relational properties rather than to discrete elements, they can be applied in a great variety of settings.

According to Lenrow, these seven functions all work toward a common set of changes that include: (1) a willingness to consider new ideas and to let go of old ideas about oneself, (2) an increased focus on the specifics of interpersonal behavior rather than on abstractions and generalities, (3) a greater awareness of how one's own style of thinking, feeling, and acting affects his relationships with others, (4) a style of learning that will apply in other interpersonal situations.

By far the most highly developed approach to the use of figurative language as a psychotherapeutic tool is found in the Neuro-Linguistic Programming (N.L.P.) school of therapy. This approach was inspired by the clinical work of hypnotist and psychotherapist Milton Erikson, who is considered by N.L.P. theorists to have been the master at the use of metaphors in psychotherapy. After transcripts of Erikson's work with figurative stories were analyzed in great detail, a pattern was discovered in his use of metaphors which was formalized, modified slightly, and eventually published in a number of articles and books. (Bandler & Grinder, 1979; Brydon & Nugent, 1979; Gordon, 1978; Lankton, 1980; Watzlawick, 1978). Erikson's technique is referred to as 'Therapeutic Metaphor', and is much too complex to describe in detail here. Basically, it involves the therapist's creating and telling the patient a story, the circumstances of which are formally equivalent to those of the patient; in other words, a story that is a metaphor or analogy of the patient's real-life situation. The therapist includes within his story a means of resolving the metaphorical problem situation, and describes the successful outcome for the characters in the story once they had put this solution into effect. The idea behind the technique is that by listening to the metaphorical story and seeing how its characters successfully resolved their problem, the patient will discover a way of solving his own problem in a similar manner. According to Lankton (1980), "telling stories that are isomorphic with a client's problems and include metaphoric solutions is an indirect but highly effective therapeutic maneuver" (p. 31).

In this section we have seen that figurative language can be used by the therapist in counseling and psychotherapy in a variety of ways. It can be used to communicate to the client his understanding of the client's situation, or to help the client change his perspective on or attitude towards that situation. Metaphor has also been used to promote interaction and communication in group counseling situations, and to help clients successfully resolve a variety of problems by N.L.P. therapists. Metaphorical language can perform a number of other important functions in psychotherapy, as Lenrow (1966) points out.

C. Other Relevant Studies

There are a number of studies which are relevant to the present one, but which have not yet been discussed. These studies deal with the relationship between metaphorical competence and creativity, or, more specifically, the divergent-thinking component of creativity. As the present study also examines the relationship between these variables, the literature dealing with this relationship will be reviewed in some detail.

The theoretical reasons for expecting a significant relationship between these two constructs is stated best by Fava (1978). He explains that similar processes seem to underlie metaphoric and creative thinking. Both can be seen as "reflecting a mode of cognition which leaps beyond conventional associations and seeks those connections between elements previously unsuspected" (p. 36). Fava goes on to illustrate that divergent-thinking tasks require an ability to generate associations which deviate from the conventional, which is one characteristic of creative thinking. This is similar to what is required in metaphoric tasks, for they depend upon the ability to see similarities between objects of quite different domains. Performance on tasks of both divergent and metaphoric thinking thus rest largely on the manner in which judgements of similarity or dissimilarity are made; a greater tolerance for deviance will enhance performance on either task.

All of the studies that have examined empirically the relationship proposed above have used subtests of the Torrance Tests of Creative Thinking (T.T.C.T.) as their measure of divergent thinking, with the exception of Fava's (1978) and Kogan, Connor, Gross, and Fava's (1980), which used subtests of the Wallach-Kogan creativity tasks (one of which is practically identical to the T.T.C.T. 'Uses' subtest), as well as the Remote Associates Test.

Porter (1969) studied the relationship between divergent thinking and figurative language production in written essays and narrative compositions. He found that all of the correlations between the T.T.C.T. fluency, flexibility and originality scales and the production of figurative language were low positive, but only one was significant, that being the one between T.T.C.T. originality and the total figures of speech produced ($r = .26$, $p < .05$) (Pollio et al., 1977, p. 89). Pollio et al. (1977) suggest that had Porter distinguished between novel and frozen figurative language he might have found a greater correlation between novel figures and divergent thinking. The present study makes this distinction, and will thus allow Pollio et al's. suggestion to be tested. In the meantime, Porter's results provide modest support at best for the notion that a positive relationship exists between divergent thinking and figurative language production.

Schaefer (1970, 1975) also investigated the relationship between these two variables. He used three subtests of the T.T.C.T. verbal battery (the same three used in the present study) and two subtests of the T.T.C.T. non-verbal battery as his measurements of creativity. As his measurement of metaphorical thinking he used a 'Similes Test' he developed, which measures the quantity and quality of figurative responses given to a number of incomplete simile stems. He found that the Similes Test was significantly correlated with the verbal T.T.C.T. subtests (r's = .32 to .58), but not with the non-verbal subtests, and concluded from these results that metaphorical competence as measured by this test appears to be related to verbal creativity.

In a study designed to investigate the relationship between verbal creativity (as measured by the T.T.C.T. 'uses' subtest) and the ability to comprehend and appreciate novel figurative language in children, Malgady (1977) found that figurative language development correlated significantly with the T.T.C.T. fluency ($r = .356$, $p < .05$), but not with T.T.C.T. originality. However, a different analysis of the data showed that the originality of simile interpretations was correlated significantly with the T.T.C.T. originality scores ($r = .37$, $p < .01$). While these results do not demonstrate absolutely that verbal creativity and figurative language abilities are closely related, they do provide some empirical support for such a link.

Using Kogan et al.'s (1980) Metaphoric Triads Task as a measure of metaphoric comprehension, both Fava (1978) and Kogan et al. (1980) have studied the relationship between metaphoric comprehension and divergent thinking. Fava (1978) found that those individuals who were most sensitive to the M.T.T. task also generated the largest number of responses on the divergent thinking task. In addition, he found significant relationship between the sensitivity to and preference for metaphoric pairings on the M.T.T. and the quality of responses on the divergent thinking tasks. These results give additional support to the hypothesis that metaphorical competence and divergent thinking are linked.

Kogan et al. (1980) also report the results of research involving these two variables, but again, a clear, consistent pattern of relationship between the two does not emerge. For example, a significant correlation was found between M.T.T and R.A.T. scores for girls, but not for boys. Correlations between subjects' M.T.T. scores and their performance on the Wallach-Kogan creativity tasks were inconsistent across both age and sex. For males of all ages, metaphoric comprehension scores were not related to the fluency of responses, but were related to the quality of responses on the divergent-thinking task. This was the case for both the verbal and figural divergent-thinking tasks for childern, but only for the figurative task for men. For females, M.T.T. performance was related to both the fluency and quality of responses on the divergent-thinking tasks. Kogan et al. (1980) conclude that "on the whole, the findings tend to support the view that quality of divergent-thinking responses (more than sheer quantity) reflects processes akin to metaphorical competence" (p. 38). Again we see that while there is some evidence supporting the relationship between metaphorical competence and divergent thinking, it is by no means conclusive.

A final study which looked at the relationship between these variables is Pollio and Smith's (1980). These researchers administered a set of 11 tasks to 70 subjects, and then carried out a factor analysis of the results. The tasks administered included the T.T.C.T. 'Uses' subtest, and a number of tests of figurative language comprehension, preference and production. The factor analysis showed that a 'Torrance' factor existed, but that it was completely independent of the other factors discovered. The authors found that

> the ability to produce a great many and varying responses to the Torrance test has resolutely stood alone; in no single analysis did it intercorrelate (to any appreciable degree) with any of the other tasks included in the battery (p. 379).

These results suggest that metaphoric competence and divergent thinking are unrelated.

We can see that there is some confusion in the findings regarding the relationship between metaphoric ability and creative or divergent thinking. While a number of studies found some significant relationships between these variables, particularly between metaphoric ability and the quality of responses to divergent-thinking tasks, others found them to be related minimally, or not at all. By including a test of divergent thinking along with two different figurative language tasks in this study, I hope to shed some additional light on this confusing topic. Because some studies found the quality of responses to divergent thinking tasks to be most closely related to metaphoric abilities, the present study hypothesizes that the 'originality' dimension of the T.T.C.T. will be more likely to correlate with the figurative tasks than will the other dimensions of the T.T.C.T.

CHAPTER THREE

METHODOLOGY

I. Subjects

The sample used in this study consisted of 50 people (25 males, 25 females) taking undergraduate or graduate courses in the Faculty of Education at the University of Alberta in the summer of 1981. The subjects were selected from a pool of 79 volunteers (31 males, 48 females) from 16 different classes. The sample subjects were selected from the volunteer pool on the basis of how convenient it was for them to meet with the researcher during the data-gathering period. That is, the researcher contacted them by telephone and arranged appointments with them until he had obtained the 25 male and 25 female subjects required.

The demographic characteristics of the sample subjects are shown in Table 1. On the basis of the interval data collected it was found that the range of the subjects' ages was from 20 - 24 at the youngest to 55 - 59 at the oldest. The average age of the total sample was approximately 35 years ($\sigma = 8.6$), that of the males was about 35.2 years ($\sigma = 7.2$), and that of the females about 34.8 years ($\sigma = 9.9$). There was a fairly even distribution of the sexes across the various demographic variables, with a few interesting exceptions. All ten of the subjects enrolled in Educational Administration programs were men, while ten of the eleven subjects enrolled in Elementary or Early

TABLE 1

DEMOGRAPHIC CHARACTERISTICS OF SAMPLE

SEX X AGE

Sex	Age															
	20 - 24		25 - 29		30 - 34		35 - 39		40 - 44		45 - 49		50 - 54		55 - 59	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Male	0	0%	5	20%	9	36%	6	24%	2	8%	1	4%	2	8%	0	0%
Female	3	12%	6	24%	6	24%	2	8%	4	16%	1	4%	2	8%	1	4%
Total	3	6%	11	22%	15	30%	8	16%	6	12%	2	4%	4	8%	1	2%

TABLE 1 Continued ...

SEX X PROGRAM AND YEAR

Sex	Program and Year																			
	Undergrad. First Year		Undergrad. Third Year		Undergrad. Forth Year		Special Student		Diploma Student		M. Ed. First Year		M. Ed. Second Year		M. Ed. Third Year		Ph. D. First Year		Ph. D. Complete	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Male	1	4%	0	0%	0	0%	5	20%	7	28%	6	24%	1	4%	0	0%	1	4%	1	4%
Female	0	0%	2	8%	6	24%	5	20%	6	24%	1	4%	2	8%	1	4%	0	0%	0	0%
Total	1	2%	2	4%	6	12%	10	20%	13	26%	7	14%	3	6%	1	2%	1	2%	1	2%

TABLE 1 Continued ...

SEX X MAJOR

Sex	Major															
	Educ. Admin.		Educ. Fndn.		Ed. Psych. Counseling		Ed. Psych. Spec. Educ.		Secondary Educ.		Social Studies		Science/ Math		English	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Male	10	40%	0	0%	6	24%	0	0%	1	4%	2	8%	1	4%	0	0%
Female	0	0%	2	8%	5	20%	1	4%	0	0%	0	0%	1	4%	2	8%
Total	10	20%	2	4%	11	22%	1	2%	1	2%	2	4%	2	4%	2	4%

	Relig. Educ.		Voc. Educ.		Business Educ.		Library		Audio Visual		Elem. Hist./ Social Studies		Elem. Reading		Early Child. Educ.	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Male	1	4%	2	8%	0	0%	0	0%	1	4%	1	4%	0	0%	0	0%
Female	0	0%	1	4%	1	4%	1	4%	0	0%	5	20%	2	8%	4	16%
Total	1	2%	3	6%	1	2%	1	2%	1	2%	6	12%	2	4%	4	8%

TABLE 1 Continued ...

SEX X OCCUPATION

Sex	Occupation																	
	Not Working		Teacher		Vice Principal		Principal		Guidance Director		School Counselor		N.A.I.T. Teacher		Univ. Prof.		Secretary	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Male	6	24%	11	44%	1	4%	1	4%	1	4%	2	8%	2	8%	1	4%	0	0%
Female	12	48%	9	36%	0	0%	0	0%	0	0%	3	12%	0	0%	0	0%	1	4%
Total	18	36%	20	40%	1	2%	1	2%	1	2%	5	10%	2	4%	1	2%	1	2%

TABLE 1 Continued ...

SEX X STUDENT STATUS

Sex	Student Status					
	Full-time Student		Part-time Student		Full-time Student	
	N	%	N	%	N	%
Male	6	24%	2	8%	17	68%
Female	10	40%	3	12%	12	48%
Total	16	32%	5	10%	29	58%

Childhood Education programs were women. Chi square analysis of these variables showed that there was a significant interaction between sex and program of study in this sample ($X^2 = 31.1$, $p < .01$). This was the only significant interaction found between sex and any other demographic variable. Another interesting characteristic of this sample is that there were twice as many women (12) as men (6) not currently working.

II. Materials and Instruments

This study required the use of four sets of materials: a pair of topics used as stimuli for the interviews; a manual used to train three judges to identify figurative language in the interviews; the Metaphoric Triads Task (M.T.T.), an instrument used to measure subjects' comprehension of and preference for metaphor; and three subtests of the Torrance Tests of Creative Thinking (T.T.C.T.) which were used to measure subjects' creativity (or, more specifically, their divergent thinking ability). Each of these will be discussed in turn below.

A. Interview Topics

As the major purpose of the present study was to determine whether or not people's use of figurative language is affected by the intensity, emotionality, and personal meaningfulness of the topic they are discussing, it was necessary to develop two topics that varied from each other along these dimensions. As well, it was important for the purpose of generalization to counseling that the more intense, emotional and meaningful topic should elicit discussions of subjects that are similar to those discussed in counseling situations.

Chapman (1971) found that his subjects used a considerable amount of figurative language when writing about peak experiences, and it was thought that a similar topic might be appropriate for the purposes of this study. However, it was felt that because some subjects' most intense, emotional and meaningful experiences may have been negative ones, the topic should be modified so as to allow subjects freedom to choose either positive or negative experiences to discuss. In the end the stimulus card for this topic directed the subject to think back in his or her life to some fairly recent experience that had been extraordinary in some way. It continued: "the experience can be either a very negative one or a very positive one, but it should be an intense experience that has had a significant impact on you as a person". This topic is referred to throughout the present study as 'Topic B'. It was thought that the experiences elicited by Topic B would have the desired quailities of intensity, emotionality, and personal meaningfulness to a much greater extent than those elicited by the other stimulus topic. This was confirmed by a number of people after they had discussed both topics with the researcher during the informal pretesting of the topics. Some of their comments were that Topic B "had some personal meaning", "was more subjective or experiential", "had more feelings involved", "had more emotional content and personal impact", "was a more personal experience", "more emotionally intense, more important and more impactful". In addition, some of these individuals mentioned that the experiences they had discussed for Topic B were quite comparable to the sorts of experiences that they thought would be discussed in counseling.

Topic B asked subjects to select a "fairly recent" experience to discuss because it was thought that a recent experience would be fresher for the subject, and thus, more intense, meaningful and emotion-laden than events of the distant past.

It was more difficult to design a topic that lacked the qualities described above but that would be of sufficient interest to subjects that they could discuss it for five to ten minutes. However, three possible topics were eventually developed that met these criteria. One of them asked about subjects' most recent vacation, one asked about their first job, and the remaining one concerned the town or city in which they had most recently lived. These three topics were tested informally on a number of the researcher's colleagues, as well as on a few strangers, in order to determine which of them was most appropriate for the purposes of the study. The topic that was finally selected was the one concerning the town or city most recently lived in. This topic is referred to as 'Topic A' throughout the study.

Once both topics had been developed, they were each typed onto a five-by-eight-inch index card. A similar format was used for both cards: at the top of the card the topic to be discussed was stated, followed by eight probe questions which were designed to stimulate subjects' thoughts on the topic and to indicate various aspects of the topic that they may want to discuss. The questions on each topic were not identical. Those on Topic A focused more on the objective aspects of the topic, while those on Topic B focused more on the subjective aspects. The final versions of the stimulus cards for both topics are presented in Appendix A.

B. Training Manual for Identifying Figurative Language

Once the subjects had been interviewed and the interviews transcribed, some means for measuring the amount of figurative language used in the interviews was needed. Barlow, et al. (1971) of the University of Tennessee's Metaphor Research Group have developed a manual which is used to train judges to identify figurative language in written transcripts, and this manual was chosen as the device for measuring the production of figurative language in the interviews. The Barlow et al. (1971) manual consists of several didactic sections, which define and give examples of various types of figurative language, followed by a number of programmed instruction exercises. These exercises give the judges a chance to individually practice and evaluate their understanding of the different types of figurative language covered in the didactic sections. After working through the didactic and programmed instruction exercise sections individually, the judges independently rate four practice prose passages, then meet as a group to discuss their ratings and resolve their differences. Finally, the judges used in the present study were asked to rate transcripts of three five-minute sample interviews selected from interviews recorded during the informal testing of the interview topics. This gave the judges a chance to familiarize themselves with and gain practice in rating the types of interviews they would be working on in the actual research situation, and to ensure that their rate of agreement was at least at the 80% level, as suggested by Pollio et al. (1977).

While the didactic section of the training manual distinguishes between 15 different types of figurative language, these 15 categories are not used when rating material for its figurative language content. Instead, each occurrence of figurative language of any kind is underlined, then classified as either novel or frozen. Novel(N) figurative language is defined in the manual as "figurative language that you believe consitutes an original contribution by the speaker to the content and context of his communication" (Barlow et al., 1971, p. 2). Pollio et al. (1977) refers to it elsewhere as language which "represents new linguistic creations developed or applied specifically to or for a given situation and never (or rarely) before encountered by a group of native speakers in that context" (p. 7). Someone referring to his anger as a "boiling, steaming, torrent" would be using a novel figure.

Frozen(F) figurative language is defined in the manual as "figurative words and phrases... which are so commonly used that we have come to accept them as parts of the language" (Barlow et al., 1971, p.2). They are figures that have become cliches, terms such as 'head of state', 'foot of the bed' or 'mouth of a jar'. The frozen-figure category was modified somewhat in the present study because the judges felt that it was too broad. All three of them thought that they could clearly distinguish between two different types of frozen figures, which they referred to as Frozen type 2 figures (F2) and Frozen type 1 figures (F1).

F2 figures were defined as those that were quite clearly figurative on the surface, but that were so commonly used that they could not be considered in any way original. Cliches and other familiar figurative expressions fit well into this category. Some of the phrases used in the research interviews that were classified as F2 figures were the following: "born-again Christian", "hair-raising experience", "off the top of my head", "emotionally drained", "mushrooming", "coming to grips with things", and "building walls around myself". Hyperboles and exaggerations that are commonly used for emphasis were also classified as F2 figures, for example: "everything is moving so fast", "I don't have a minute to myself", "the whole town came to our reception", "I'm completely involved in everything", and "there are countless colleges in Edmonton".

The judges defined F1 figures as those that, while metaphorical according to a strict definition of the term, were so commonly accepted and used in a literal manner in everyday conversation they they would not normally be considered figurative at all. Examples of F1 figures re: "being upset", "taking turns", "he's a warm person", "moving up in the world", "being fed-up", and "we're close to each other".

When rating the transcripts of the interviews, then, each judge would first underline every instance of figurative language he found, and then indicate whether he considered it a N, F2, or F1 figure. Once all of the interviews had been rated independently in this manner, the judges met to compare their ratings, and to decide as a group on the final codings for each instance of figurative language. Each interview was gone through separately, and every word or phrase that had been identified as figurative by any of the judges was discussed to see whether or not the other judges agreed with the judgement. If all three judges eventually agreed that a certain word or phrase was indeed figurative, it was accepted as such. If one or more judges disagreed with a judgement, then it was not accepted as figurative. Figures that were agreed on are referred to here as 'accepted figures', while those that were not agreed on are referred to as 'rejected figures'. All judgements and final decisions were recorded and coded according to the coding system outlined in the Barlow et al. (1971) manual:

3+1: This means that all three raters independently judged this instance as figurative.

2+1: this means that two of the three raters independently judged this instance to be figurative and that during the group discussion the third rater agreed.

1+2: this means that only one of the raters independently judged the instance to be figurative but that after a group discussion the other two raters agreed.

2-1: this is the case in which two raters independently chose an instance as figurative but the third judge after discussion cannot agree.

1-2: finally, this is the case where one rater independently chose an instance as figurative but the other two raters still disagreed even after discussion.

Whether an instance was classifed as N, F2 or Fl was determined by the rule of simple majority. If two or more raters agreed that an instance was a N, F2, or Fl figure, that decision was final. In the case of instances that were rejected as figurative , the decision as to the category of the rejected figure was made by the person(s) whose rating was rejected.

1. Reliability of Figurative Language Rating Procedure

The Barlow et al. (1971) procedure was selected for this research because it was the only research instrument that the author found that provided a method for measuring the amount of figurative language used in spoken or written communications. However, it has been used extensively in research on figurative language, and has proved itself to be a good research tool. Pollio et al. (1977) list the inter-rater reliability figures for a number of studies that have used this procedure. The figures are based on ratings of eight spoken and eight written language samples, and show that the reliabilities are quite high for the procedure. In only one of these 16 samples did the rejection rate (2-1, 1-2) exceed 15%. Thus, overall rater agreement after discussion is consistently at the 80% level or better. Of the figures that were eventually agreed on after discussion, from 55% to 96% of them were agreed on independently by two of the three raters. Without exception, acceptance at the 2 + 1 and 3 + 0 levels was higher for novel than for frozen figures within the same language samples. This indicates that raters more often agree on the occurrence of novel than frozen figures, which is not surprising, as novel figures are, by definition, unique and original, and thus much easier to spot than frozen figures. Acceptance rates also tend to be higher for written than for spoken language samples. On the basis of Pollio et al's (1977) reliablity figures we would expect an overall agreement rate of 80% to 90% in the present study, with the rate being higher for novel than for frozen figures. This is an acceptable level of inter-rater reliability for a research instrument such as this one.

C. Metaphoric Triads Task (M.T.T.)

As was pointed out in Chapter Two, recent research has suggested that more than one measure of figurative language competence should be used in studies investigating this domain. Because the present study was designed to examine the relationship between people's production of metaphorical language in conversational settings and their comprehension of and sensitivity to other dimensions of metaphor, the

Metaphoric Triads Task (M.T.T.) was selected as the second instrument. The M.T.T. measures subjects' comprehension of and preference for metaphorical as opposed to non-metaphorical pairings of pictures presented to them. The test consists of a set of 29 35mm color slides each of which shows three drawings. Each slide is projected onto a screen, and the subjects are asked which two of the three drawings go together best. They indicate their most preferred pairing on an answer sheet, along with a brief explanation of the rationale behind their choice. They are then asked whether there are any other pairings that they think are good, and are told to indicate the second and third best pairings, if there are, on the answer sheet, along with their rationales for each. No pressure is applied on subjects to make more than one pairing for each slide. If they see additional pairings, they are to write them down; if not, they are to proceed to the next slide.

The slides are constructed in such a way that there is a reasonable basis for pairing any two of the three drawings contained in each. However, one of the three possible pairings is metaphoric in nature, while the others are non-metaphoric. For example, one slide shows drawings of a spinning toy top, a young girl playing with some toys, and a dancing ballerina. The metaphoric pairing is the top with the ballerina, as the ballerina could be said to be spinning like a top, or vice versa. The young girl--top pairing is based on the idea that the girl might be playing with the top. The girl--ballerina pairing is based on the idea that the girl might hope to grow up to be a ballerina.

Subjects' responses to each M.T.T. slide were scored along two dimensions: metaphor comprehension and metaphor preference. For metaphor comprehension, a score of two was given if the subject chose the metaphorical pairing and gave a satisfactory explanation of the metaphorical basis of the combination. A score of one was assigned if the subject selected the metaphorical pairing, but gave a less than completely satisfactory explanation of the metaphorical basis of the pairing. A score of zero was given if the subject failed to join the critical pair, or if his explanation of that pairing was non-metaphorical in nature.

For metaphor preference, a score of two was given if the metaphorical pairing was selected first, a score of one was assigned if it was chosen second, and a score of zero was given if it was chosen third, or was not chosen at all. In order to receive a score of one or two on the metaphor preference scale, a subject had to first score a one or two on the comprehension scale. Thus, no points were given to subjects who selected the metaphorical pairing first if their rationale for this selection was not at least partially metaphorical in nature. A score of zero was given if the subject failed to join the critical pair, or if his explanation of that pairing was non-metaphorical in nature.

In addition to the metaphor comprehension and preference scores, a tally was kept of extra metaphorical pairings. Subjects who selected one of the non-metaphoric pairings, but who provided a metaphorical rationale for that pairing, were given an additional two points for each such occurence under the heading 'extra metaphors'. In fact, there were very few pairings of this sort (only nine out of 750 pairings). Finally the M.T.T comprehension, preference, and extra metaphor scores were summed to give a 'total M.T.T.' score.

Because of time restrictions in the data gathering process, not all 29 slides were presented to the subjects. The M.T.T. slides were originally constructed in two sets, the first consisting of 15 items and the second of 14. Only the first set was used in this study. A description of these slides can be found in Appendix B.

1. Reliability and Validity

Research done by Kogan et al. (1980) in developing and testing the M.T.T. indicates that it is adequately reliable for research purposes. Inter-rater reliabilities calculated from two judges' independent scoring of two different samples' M.T.T. responses yielded agreement rates of 94% to 96.9%. Fava (1978) found an inter-judge agreement rate of 91% on 580 independently scored items. Almost all discrepancies between raters were only one point in magnitude. Thus "judges occasionally disagreed over total versus partial credit or partial versus no credit; they virtually never disagreed to the extent of attributing total versus no credit to an item" (Kogan et al., 1980, p. 17). Kogan et al. (1980) have also compiled data on the internal consistency of the M.T.T. Analysis based on 12 different samples of subjects presented with Set I of the M.T.T. slides (the set used in this study) yielded coefficient alpha scores in the mid .70's to the mid .80's for 11 of the 12 samples. For one sample of 31 nine-year-old males this score fell to .42. Fava's (1978) research with regular college students and fine arts students yielded alpha scores in the .80 to .84 range. Thus, we can see that there is a high inter-item consistency in Set I of the M.T.T. slides. In addition, there is a high level of consistency of performance of Sets I and II of the slides. On one sample the correlations between Set I and Set II scores were .70 for males and .80 for females ($p < .001$), while on an another they were .73 and .55 for males and females respectively ($p < .001$). When Sets I and II were administered to one sample with a six-month interval between them these correlations dropped in magnitude, but remained statistically significant ($r = .40$, $p < .05$ in males; $r = .62$, $p \leq .01$ in females). These figures indicate that the decision to use only Set I of the M.T.T. slides can be justified statistically. On the basis of the above figures Kogan et al. (1980) concluded that "it is safe to assert that the M.T.T. is sufficiently reliable to warrant validational reserach" (p. 21).

Because the M.T.T. is a very new instrument, there is not yet a large body of data dealing with its validity. However, the authors of the test do present some preliminary validational information in their 1980 monograph, which is based on studies they conducted during the development and initial testing of the instrument. As to construct validity, Kogan et al. (1980) found that performance on the M.T.T. was significantly related to the quality of responses to divergent thinking tasks in both child and adult samples. As the author's point out,

> the production of unusual, yet fitting, interpretations of abstract patterns involves a kind of visual cross-categorical thinking that has aspects in common with the comprehension of visual metaphor (Kogan et al., 1980, p.61).

The relationship between metaphorical and divergent thinking abilities was addressed in more detail in Chapter Two. Other construct - validational evidence reported by the authors includes significant correlations between M.T.T. scores and category breadth and physiognomic sensitivity indices in young adults, both of which are thought to involve cognitive processes similar to those underlying metaphoric sensitivity.

The strongest evidence for the convergent validity of the M.T.T. is that "metaphoric comprehension generalizes from the visual M.T.T. to an analogous verbal instrument" (Kogan et al., 1980, p.61). In two separate studies involving older adolescent samples, very strong correlations were found between subjects' performance on the M.T.T. and their performance on a parallel verbal metaphor comprehension task. In the first study correlations between subjects' scores on the M.T.T and the verbal task ranged from .53 to .66 ($p < .005$), and in the second study they ranged from .48 to .65 ($p < .01$).

The 1980 monograph also presents some evidence for the concurrent validity of the M.T.T. While correlations between teachers' ratings of subjects' 'figurative language appreciation and usage', and subjects' M.T.T. scores were statistically significant in several instances, these results were thought to be partially due to the 'halo effect', for when teachers' ratings of the same subjects' general intellective aptitudes were held constant, the above correlations were no longer significant. However, other findings, particularly that art teachers' ratings of esthetic sensitivity were significantly correlated with M.T.T. scores, give a precursory indication that there may be significant links between M.T.T. performance and real-world behaviors (Kogan et al., 1980, p. 63).

There are a number of reasons why the M.T.T. was chosen as the second metaphoric ability task for the present study. The fact that there appears to be no ceiling effect with the M.T.T. means that it is appropriate for use with adults, which many other measures of metaphorical competence are not (Fava, 1978). Another reason for selecting the M.T.T. is that it has never been administered in conjunction with a measure of figurative language production, so far as could be determined. By administering both metaphor comprehension/ preference and production tasks, the relationship between them can be examined in the hope that it may add to our understanding of the nature of metaphoric competence. Finally, while the M.T.T. has been linked to the divergent-thinking component of creativity as measured by the R.A.T. and Wallach-Kogan tests, it has never been studied in relation to the T.T.C.T., probably the most commonly used test of divergent thinking available. By examining the relationship between the M.T.T. and the T.T.C.T., we will gain additional information on the link betwen the M.T.T. and divergent thinking, as well as on the relationship between divergent thinking and metaphorical competence in general.

D. Torrance Tests of Creative Thinking (T.T.C.T.)

As was mentioned in Chapter Two, research on the relationship between divergent thinking and figurative language abilities has yielded inconclusive results. In addition, the relationship between divergent thinking and the production of figurative language in speech has never been researched, as far as could be determined. For these reasons, it was decided to include a measure of divergent thinking in this study.

Divergent thinking is defined by Guilford (1959) as thinking "that goes off in different directions. It makes possible changes of direction in problem solving and also leads to a diversity of answers where more than one answer may be acceptable" (p. 381). Divergent thinking is only one of many components of creativity, but it is the component most agreed on by researchers as being an important element of creativity, and the one that most tests of creativity focus on.

Three subtests of the Torrance Tests of Creative Thinking (T.T.C.T.) (1966) were chosen to be the measure of divergent thinking in the present study. The Torrance tests were selected for a number of reasons. First, they are the tests most widely used in research on creativity. Second, the Torrance manual provides reliability and validity data, which many other creativity tests, including Guilford's, do not. Third, the T.T.C.T. can be used at any educational level, an important consideration in the present study. Finally, the T.T.C.T. has never been administered in conjuction with either the M.T.T., or an oral figurative language production task such as that used in the present study. By administering these three tasks together, it was hoped that new insights might be gained into the nature of the divergent-thinking/metaphoric-abilities relationship.

There are both verbal and visual forms of the T.T.C.T., but only the verbal form (Verbal Form 'A') of the test was used because of the present study's focus on other language abilities. The T.T.C.T. Verbal Form 'A' consists of seven subtests, each of which involves a different sort of divergent thinking activity. Because of time constraints, it was considered unfeasible to administer all seven subtests, which take 45 minutes to complete. Hence, three of the seven subtests were selected for use in this study. Together they took 20 minutes to complete, about 44% of the time required for the total battery. The three subtests chosen were 'Ask Questions', 'Unusual Uses', and 'Just Suppose'. They were selected for the following reasons:

1. They represent three of the five different types of divergent thinking activities that make up the battery.

2. Two of these subtests are described in the T.T.C.T. manual as being among the most important subtests in the battery. The other is listed as the sixth most important.

3. All three subtests have been found to correlate highly with T.T.C.T. total battery scores. 'Ask Questions' correlates .90, 'Unusual Uses' correlates .87, and 'Just Suppose' correlates .78 with the total battery scores (Torrance, 1966, c).

4. No special materials were needed for any of these subtests (one of the other subtests involved the use of a stuffed toy).

5. This combination of subtests has been used previously in conjuction with a test of figurative language sensitivity, and was found to correlate significantly with it (Schaefer, 1970). Using the same subtests would make it possible to determine if they correlate with the different measures of figurative language sensivity.

These three subtests will now be described in more detail.

1. Ask Questions - In this test the subjects are presented with a simple drawing, and are then asked to write down as many questions as they can think of about it. They are to ask questions that they would need to know the answers to, to know for sure what is happening in the drawing. Torrance (1966, c) explains that this activity "is designed to reveal the individual's ability to sense what he cannot find out

from looking at the picture and to ask questions that will enable him to fill in the gaps in his knowledge" (p. 11). Curiosity is considered by Torrance to be an important element of creativity. This task takes five minutes.

2. Unusual Uses - This task simply requires subjects to list as many new, interesting and unusual uses for cardboard boxes as they can think of. This activity is a modification of one of Guilford's original divergent thinking tasks, the 'Brick Uses' task, and it involves a task that almost all tests of divergent thinking include. Since most people naturally think of cardboard boxes as containers, this subtest measures a subject's ability to free himself of a well established set and to demonstrate flexibility of thinking. This task takes ten minutes.

3. Just Suppose - In this activity the subject is presented with a highly improbable situation and is asked to list all of the consequences that would result if this unlikely situation were to actually occur. The improbable situation presented in this task is "just suppose clouds had strings on them which hang down to earth" (Torrance, 1966, a, p. 14). This task is also a modification of one of Guilford's original divergent thinking tasks, and is probably the second most common task found on tests of divergent thinking. Torrance (1966, c) explains that this activity, which measures a subject's imagination, his ability to consider, evaluate, and 'play with' unusual ideas, and to think through their possible consequences, is highly important in creative behavior. This task takes five minutes.

All of the above subtests are scored along three dimensions: fluency, flexibility, and originality. Fluency is simply the total number of relevant responses generated by each of the tests. Flexibility is measured by the number of shifts in thinking, or the number of different categories of responses subjects produce. A list of the most common categories of responses is included in the scoring guide; this list is followed when scoring the tests for flexibility. Originality is defined as the statistical infrequency of the responses, or the degree to which responses represent a mental leap or a departure from the obvious and commonplace. Again, the scoring guide contains a list of the most common responses and a score for each. It also gives instructions on how to rate responses not contained in the scoring guide. Once each subtest has been scored on these three dimensions, the scores on each dimension are summed, giving total scores for fluency, flexibility and originality across all three subtests. Finally, these three scores are summed up to give a total T.T.C.T. score.

1. Reliability and Validity - Studies of scorer reliability on the T.T.C.T. have shown that scorers who carefully study, accept, and follow the scoring manual precisely are able to score the tests with an acceptable level of reliability. The mean Pearson product-moment correlation coefficients between scoring done by specially trained, experienced judges and untrained teachers who simply follow the scoring guide are .99 for fluency, .95 for flexibility, and .91 for originality (Torrance, 1966, b, p. 11). Other studies of inter-scorer reliability have consistently yielded correlations between experienced and inexperienced scorers in excess of .90 (Torrance, 1966, c, p.

18). Alternate form, odd/even, and short-interval test-retest reliability studies have also been carried out on the Torrance tests, and have yielded reliability coefficients ranging mostly from the .70's to the .90's (Anastasi, 1976, p. 394).

The T.T.C.T. Norms-Technical Manual (Torrance, 1966, c) summarizes more than 50 studies of the validity of the test, most of which deal with its construct and concurrent validity. Most critics who have reviewed these validational studies have concluded that "the test does measure behaviors consistent with the literature on creative behavior" (Baird, 1972, p. 837; see also Anastasi, 1976, p. 396, Holland, 1972, p. 841). While many critics express concern about the low predictive validity of the test, this concern applies equally to other tests of creativity (Hoepfner, 1972, p. 842). As Schezter and Linden (1979) point out, there is a problem inherent in all creativity tests, namely, how to identify acceptable external criteria for validating them. Thus, the problem of predictive validity is not so much specifically related to deficiencies in the T.T.C.T., as it is to the nature of the dimension it is attempting to measure. In any case, there appears to be agreement among reviewers of the T.T.C.T. that it has sufficient reliability and validity to make it a useful tool for research into the nature of creativity (Baird, 1972; Holland, 1972), and its relationship to other variables. In short, the reliability and validity of the T.T.C.T. are at least as good as, and in some cases are better than, other tests of creativity and divergent thinking.

III. Procedure

As was mentioned earlier, subjects for this study were recruited from 16 education classes taking place at the University of Alberta in the summer of 1981. The researcher visited each of these classes introduced himself, and then explained that he needed volunteers to participate in a research project. He said that the research involved "examining the things that people have to say about different experiences that they have had in their lives, and how they relate to other aspects of them as individuals". He told the students that volunteers would be required to give up about one hour of their time, and briefly described the types of activities they would be asked to participate in: two short interviews dealing with their life experiences, and two psychological tests. Then a sheet of paper was passed around on which volunteers wrote their names and phone numbers. Volunteers were contacted by telephone, and individual interview and testing times were set up with each of the 25 males and females needed for the study. A phone call was made to all subjects the night before their appointments to remind them about them.

The interviews and testing took place in the facilities of the Faculty of Education Clinical Services Division. A large, warm, well-lit and comfortably furnished room (room 161) usually used for counseling was where the interviewing and testing were conducted. The researcher met each subject in the reception area of the Clinical Services facilities, and escorted him or her to the room where the interviews were to take place..

Once the subject was comfortably seated, the researcher engaged him or her in light conversation for about five minutes before actually starting the data collection procedure. He discussed with them such topics as their holiday plans, the courses or programs they were enrolled in, etc. The purpose of this conversation was to try to reduce the subjects' anxiety and to allow them time to adjust and feel comfortable in the surroundings and with the researcher. Once the researcher felt that he had established some rapport with each subject, and that the subject was at ease, the data collection began.

First each subject was asked to fill out an information sheet, a sample of which can be found in Appendix C. Included on this sheet was a statement giving the researcher permission to use the information given for research purposes, and discussing the conditions of confidentiality, which the subject was asked to sign.

Once this form had been filled out and signed, the instructions for the interviews were explained to the subject. He or she was asked to use a normal, conversational style of speaking. Each subject was told that there would be a number of questions on the interview topic cards, and that these questions were designed simply to stimulate their ideas on the topic given there. They did not have to answer these questions one by one, though they could if they wanted to. However, if they preferred to discuss the topic in a more spontaneous, free-flowing manner, that was fine as well.

Next, the length of the interviews was discussed. Subjects were told that the interviews would be timed, and that it took most people seven to ten minutes to discuss each of the topics. The researcher explained that he would like to keep the interviews to a maximum of ten minutes, and that he would therefore indicate to them when they had reached the seven to eight minute mark by asking them to sum up what they had said, or by asking whether they would like to add anything to what they had said. This procedure was used throughout the interviews, and worked quite well for the most part, though a few subjects required more than ten minutes to complete their thoughts, and were given the extra time they needed to do so.

Finally, before the interviews began, subjects were assured verbally of the confidentiality of whatever they said. They were also asked not to discuss their experiences in the research project with other subjects, so that all subjects would be naive when coming into the interview/testing situation.

At this point subjects were asked to select the topic that they would discuss first. This was done by means of a randomized topic selection procedure, which was instituted so that any differences found in figurative language usage between topics A and B could not be attributed to the order of topic presentation. The procedure used involved the subjects' blindly chosing a slip of paper with a letter 'A' or 'B' on it from an envelope. The letter chosen determined the topic that was discussed first. This procedure resulted in 12 males and 13 females discussing Topic A first, while the rest discussed Topic B first.

When the first topic had been selected, the stimulus card for that topic was given to the subject to read. He or she was given a few moments to think about the topic and to ask questions. If there were no questions, the tape recorder was started and the interview began. The role of the researcher in the interviews was basically a passive one. The subjects did most of the talking, and took the interview in whatever direction they wanted to. The researcher listened actively to the subject, responding to him or her with minimal encouragers ("yes", "I see", "right", "uh huh", etc.), or with short paraphrases of what he or she had said. These responses indicated the researcher's interest in what the subject was saying, and helped to keep him or her talking, but provided as little direction as possible, thus keeping the researcher neutral. Occasionally he would ask a subject a question in order to prompt him or her to further discussion, but such questions were almost always either requests for elaboration of something the subject had said, or restatements of the questions printed on the topic cards. When the subject had completed his discussion, the interview ended and the tape recorder was turned off. The above procedure was then repeated with the second topic.

When both interviews were finished, the subjects were asked to sit in a chair at a desk in front of a slide screen in the same room. They were given the M.T.T. answer sheet, and a sample M.T.T. slide was projected onto the screen. The instructions for the M.T.T. were then explained to them, and they were given an opportunity to ask questions. When the instructions were clear, the first slide was projected onto the screen, and they were allowed to progress through the slides at their own pace, using the projector's remote control switch to do so. When they had completed their responses to all 15 M.T.T. slides, the projector was turned off, their answer sheets were collected, and we proceeded to the next task.

The subjects remained seated at the desk, and the three T.T.C.T. subtests were given to them. The instructions for each of the subtests were read directly from the test manual, and the time allowed for each task was indicated. Once the subjects clearly understood the instructions for a task, they were told to begin. At the end of the time allotted for the task, the subjects were stopped, and then went to the next task. When all three subtests had been completed, the subjects were thanked for their participation in the study, and were then free to leave. In almost all cases, the total time required to interview and test a subject was between 65 and 75 minutes.

When all subjects had been interviewed and tested, the scoring process began. The M.T.T. and T.T.C.T. tests were scored according to the guidelines mentioned eariler in this chapter. Subjects received 4 scores on the M.T.T.: metaphor comprehension, metaphor preference, extra metaphor, and a M.T.T. total score, which was the sum of the other three. On the T.T.C.T. subjects received four scores as well: fluency, flexibility, originality, and a T.T.C.T. total score which was the total of these.

The scoring of the interviews was somewhat more complicated. Transcripts of the last five minutes of each interview were typed, which reduced the amount of scoring to be done considerably, but still provided adequate samples of subjects' speech for analysis. The last five minutes were chosen for transcription because it was thought this segment would be more representative of subjects' normal conversational styles than an earlier segment, due to the fact that subjects would feel more relaxed and less self-conscious in speaking at the end of the interviews than they would at the beginning. In addition, by the end of the interviews subjects would have had time to 'warm up' and gain momentum in their speech, and thus would tend to speak in a manner more normal for themselves than they would at the beginning.

When the last five minutes of all the interviews had been transcribed, copies of them were made and distributed to the three judges who would be scoring them. The researcher was one of these judges. The others were colleagues of the researcher, one a woman with a Master's degree in Educational Psychology (Counseling), and the other a man working towards his Master's degree in the same field. After going through the Barlow et al. (1971) training procedure outlined earlier and scoring three practice interviews to ensure that their agreement rate was above the 80% level, the judges were given three to four weeks to independently score all of the interview transcripts.

When the independent scoring was completed, the judges met over a two-day period to discuss their judgements according to the Barlow et al. (1977) manual's instructions. Each interview was discussed individually, and every figure scored was discussed, agreed or disagreed on, assigned a rating (3+0, 2+1, 1+2, 1-2, 2-1), and then categorized as novel (N), frozen type two (F2), or frozen type one (F1). The ratings and categories of all figures were then totalled, giving each subject four scores for each topic, eight scores in all. These scores were referred to as NA (N figures - Topic A), F2A (F2 figures - Topic A), F1A (F1 figures - Topic A). TA (Total figures - Topic A), NB (N figures - Topic B), F2B (F2 figures - Topic B), F1B (F1 figures - Topic B), and TB figures (total Figures - Topic B).

A problem was discovered when the interviews were transcribed that suggested to the researcher that the above scores should be treated in another manner as well. It was found that even though equal five-minute segments of all the interviews were transcribed, there was quite a bit of variability as to the actual amount of speech produced by different subjects in that amount of time. It was possible that this factor might affect the comparability of figurative language production scores between subjects, i.e. that subjects' figure production rates might be different when expressed in relation to the number of words spoken than when expressed relative to a certain segment of time. In order to account for this, each subject's figure production scores were adjusted by dividing them by the approximate number of words they spoke in the five minute segments, and then multiplying the resulting numbers by 100. This adjustment procedure resulted in figures that represented the number of N, F2, F1 and total figures produced per 100 words by each subject.

Thus, in addition to the eight figure-production scores mentioned above, each subject also received eight 'adjusted' figure-production scores, one each for NA, F2A, F1A, TA, NB, F2B, F1B and TB. These figures are referred to in this study as the 'adjusted figures', or 'adjusted data', while the original, unadjusted figures are referred to as the 'raw figures' or 'raw data'. All statistical analyses were conducted using both the raw data and the adjusted data.

CHAPTER FOUR

RESULTS

I. Major Hypothesis

The major hypothesis of this study was that subjects would use more figurative language when discussing a more emotional, intense, and personally meaningful topic (Topic B) than when discussing one that was less so (Topic A). Before examining the results of this aspect of the study, it is important to consider the reliability of the judges' rating of figurative language.

A. Reliability of Ratings

In chapter three, figures were given concerning the inter-rater reliability of the Barlow et al. (1971) technique for identifying figurative language. In Table 2 the inter-rater reliability figures for this procedure as used in the present study are given. It can be seen from this table that of the 1381 figures that were identified by the judges independently, 1142 were agreed on after discussion, giving an overall agreement rate of approximately 83%. This compares with agreement rates ranging from about 85% to 91% in other research using the same rating procedure (Pollio et. al., 1977; Pollio & Pollio, 1974). Of the 1142 figures that were eventually accepted, 28% were identified by all three raters independently, 37% were accepted at the 2 + 1 level, and 35% were accepted at the 1 + 2 level.

If we examine the pattern of agreements and disagreements in more detail, it becomes apparent that some types of figures were more

TABLE 2

RELIABLITY OF RATER JUDGEMENTS

	Type of Figure								
	N Figures		F2 Figures		F1 Figures		Total Figures		
Rater Scoring Category	N	% of N Figs. accepted or rejected	N	% of F2 Figs. accepted or rejected	N	% of F1 Figs. accepted or rejected	N	% of Total Figs. accepted or rejected	% of Total Figs Scored
3 + 0	34	68%	169	30%	120	22%	323	28.3%	23.4%
2 + 1	10	20%	228	41%	181	34%	419	36.7%	30.3%
1 + 2	6	12%	160	29%	234	44%	400	35.0%	29.0%
Subtotal	50	100%	557	100%	535	100%	1142	100.0%	
% of Accepted Figs.	4%		49%		47%				
Total Figs. Accepted		1142		83% of Figs. scored					
2 - 1	0	0%	6	32%	13	6%	19	8.0%	1.4%
1 - 2	3	100%	13	68%	204	94%	220	92.0%	15.9%
Subtotal	3	100%	19	100%	217	100%	239	100.0%	
% of Rejected Figs.	1%		8%		91%				
Total Figs. Rejected		239		17% of Figs. scored					
Total Figs. in Category	53	4% of total figs. scored	576	42% of total figs. scored	752	54% of total figs. scored	1381	100.0% of total figs. scored	
Total Figs. Scored		1381							100.0%

easily identified than others. For example, the final agreement rates were 94% for Novel figures, 97% for F2 figures, but only 71% for F1 figures. Novel figures had the highest rate of acceptance at the 2 + 1 level or better (88%), as compared to 71% for F2 figures and only 56% for F1 figures. As to rejected figures, only 1% were categorized as Novel figures and 8% as F2 figures, while F1 figures accounted for 91% of all rejected figures.

In examining these figures it becomes obvious that Novel figures were the most easily spotted and were almost always agreed upon once they had been spotted. F2 figures were not recognized quite so easily, but once identified were agreed upon at an even higher rate than Novel figures. F1 figures, on the other hand, were relatively difficult to identify, and had a considerably lower rate of agreement than the other types of figures. It therefore seems safe to conclude that the judges' ratings of figurative language were generally reliable, and that they were especially reliable for identifying Novel and F2 figures.

B. Results

As was mentioned in Chapter 3, the data concerning the number of figures produced by each subject in the interviews was analyzed in two ways. The first analysis made use of the raw number of figures identified in the last five minutes of each interview. The second analysis converted these raw figures into a ratio of number of figures per 100 words spoken. The reason for doing this second analysis was because of the variation in the number of words spoken by subjects in the five-minute segments examined, which made it important to consider the figures produced as a proportion of the words spoken, as this could result in a different pattern of figurative language usage than was indicated by the raw figures.

Tables 3 and 4 give the ranges, means and standard deviations for N, F2, F1, and total figures identified in Topics A and B in their raw and adjusted forms respectively. The distributions of scores within each category of figurative language were relatively normal, with the exception of raw and adjusted novel figures for both topics, whose distributions were all positively skewed. This was due to the large number of subjects who produced no novel figures when discussing Topics A (39) and B (33), which also explains why the means for Novel figures are in all cases so low. When subjects who did not use novel figures when discussing a topic are removed from the distributions, we find that those who did use such figures produced a mean of 1.45 figures on Topic A ($\sigma = .69$), and 2.06 on Topic B ($\sigma = 1.52$). The corresponding adjusted figures are 2.34 per 100 words on Topic A ($\sigma = 1.07$), and 3.15 per 100 words on Topic B ($\sigma = 1.96$). Thus, those who did use novel figures used substantially more of them on average than is indicated in Tables 3 and 4.

In looking at the above information it is readily apparent that, on average, subjects used more N, F2, F1, and total figures when discussing Topic B than Topic A. This holds true for both raw and adjusted figures. It should also be noted that in every case, the standard deviations are also higher for Topic B. These results support the major hypothesis of the study.

TABLE 3

FIGURE PRODUCTION:
TOPICS A AND B
RAW DATA

Type of Figure	Topic A			Topic B		
	Range	Mean	Standard Deviation	Range	Mean	Standard Deviation
N Figs.	0 - 3	.32	.68	0 - 6	.70	1.30
F2 Figs.	0 - 11	5.34	3.14	2 - 19	7.32	4.37
F1 Figs.	0 - 18	4.78	3.25	1 - 24	6.08	4.18
Total Figs.	0 - 27	10.44	5.23	3 - 34	14.1	6.82

TABLE 4

FIGURE PRODUCTION: TOPICS A AND B ADJUSTED DATA

Type of Figure	Topic A			Topic B		
	Range	Mean	Standard Deviation	Range	Mean	Standard Deviation
N Figs.	0 - 4.20	.51	1.09	0 - 7.02	1.07	1.88
F2 Figs.	0 - 18.95	8.50	4.85	3.12 - 30.89	11.90	6.96
F1 Figs.	0 - 21.15	7.60	4.64	2.10 - 29.09	9.46	5.45
Total Figs.	0 - 30.77	16.62	7.46	6.32 - 42.19	22.45	9.06

A more descriptive approach to examining the patterns of figurative language use in Topics A and B is provided in Tables 5 and 6. These tables indicate the numbers of subjects who used equal amounts of N, F2, F1 and total figures on both topics, the numbers who used fewer figures on Topic B along with the mean number of figures fewer, and the number of subjects who used more figures on Topic B, along with the mean number of figures more. From these tables we can see that while some subjects did use fewer figures on Topic B, in every case a larger number used more. In addition, for those who used more figures on Topic B, the mean difference in the number of figures used between topics was larger than for those who used less figures on Topic B. For example, in examining the statistics on raw novel figures, it was found that five of the six who used fewer novel figures on Topic B used fewer than one figure less, while six of the 13 who used more novel figures on Topic B used more than one figure more.

Another way of comparing the differences in figure usage between topics is to consider the changes in figure production exhibited by those subjects whose production fell within the middle 50% of subjects interviewed. In order to do this, the 25th and 75th percentiles of the distributions of scores for raw and adjusted F2, F1, and total figures were obtained for Topics A and B, and plotted on graphs so that they could be compared easily. This procedure was not carried out for novel figures because of the large number of subjects who produced none on one topic and/or the other; the result being that the majority of subjects (92% on Topic A, 82% on Topic B) produced only one novel figure or less, thus making the procedure meaningless for these figures. The graphs for the remaining figures are found in Figures 1 and 2.

TABLE 5

DIFFERENCES IN FIGURE PRODUCTION:
TOPICS A AND B
RAW DATA

Type of Figure	Topic				
	A = B	B < A	Mean Difference	B > A	Mean Difference
Novel Figs.	31	6	1.16	13	2.0
F2 Figs.	7	14	3.07	29	4.9
Fl Figs.	9	15	2.40	26	3.9
Total Figs.	8	7	5.00	35	6.2

TABLE 6

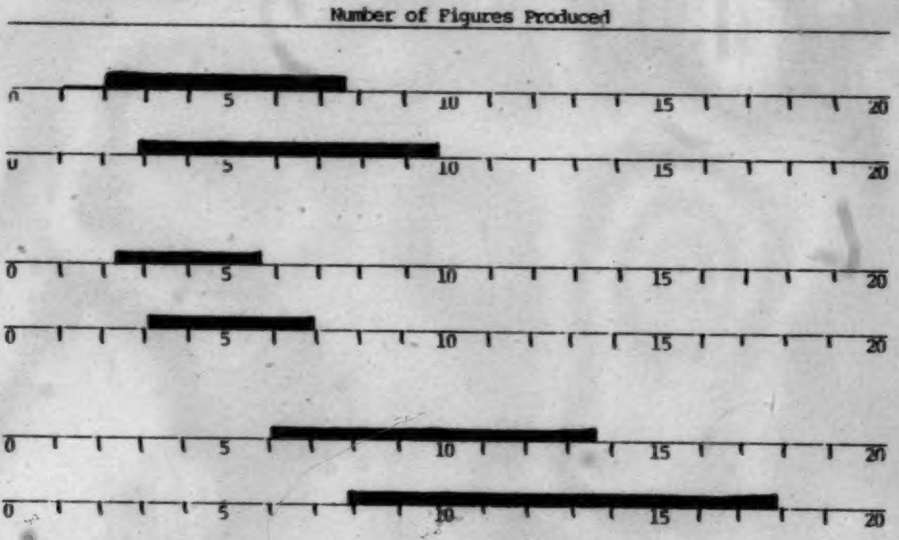
DIFFERENCES IN FIGURE PRODUCTION:
TOPICS A AND B
ADJUSTED DATA

Type of Figure	Topic				
	A = B	B < A	Mean Difference	B > A	Mean Difference
Novel Figs.	28	6	.17	16	.24
F2 Figs.	2	16	.45	32	.74
Fl Figs.	3	20	.34	27	.52
Total Figs.	2	13	.45	35	1.00

FIGURE 1

FIGURE PRODUCTION:
TOPICS A AND B
RAW DATA

(MIDDLE 50%)

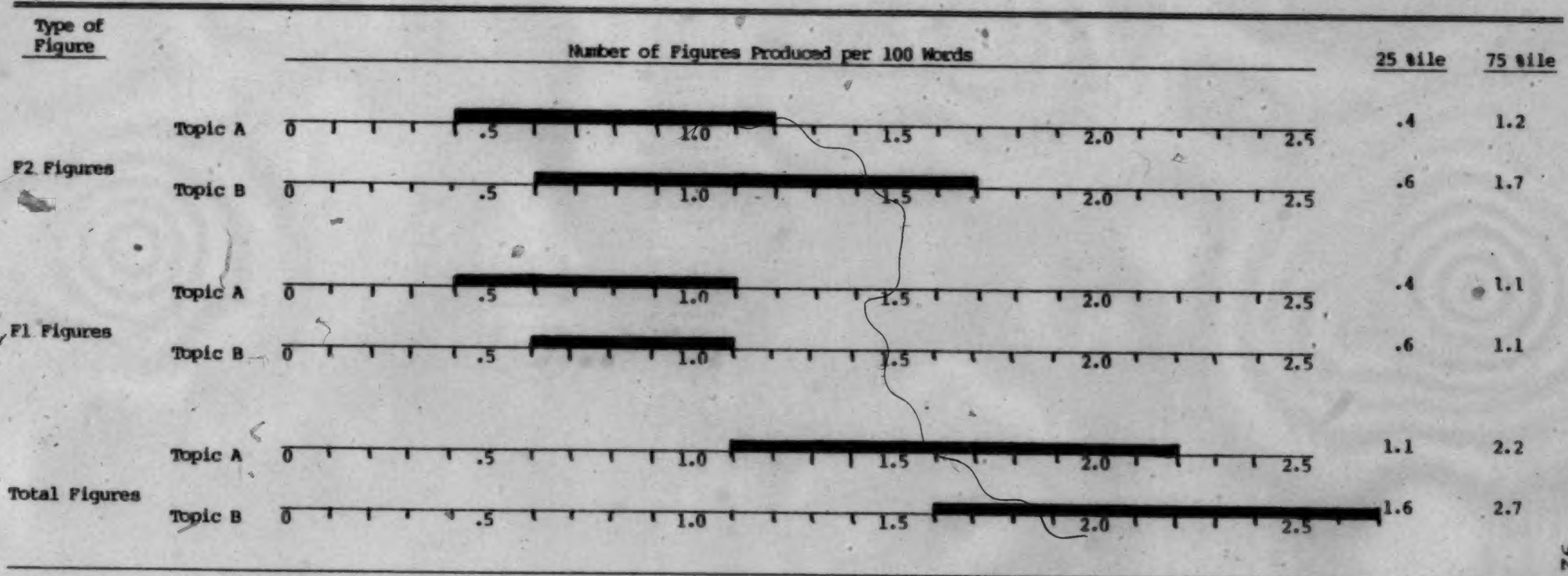


Type of Figure		25 %ile	75 %ile
F2 Figures	Topic A	2.0	7.6
	Topic B	2.9	9.8
F1 Figures	Topic A	2.3	5.7
	Topic B	3.1	6.9
Total Figures	Topic A	6.1	13.7
	Topic B	7.9	17.9

FIGURE 2

FIGURE PRODUCTION:
TOPICS A AND B
ADJUSTED DATA

(MIDDLE 50%)



It can be seen from these graphs that even with those subjects who produced only moderate amounts of figurative language there were noticeably more figures used on Topic B than on Topic A. This difference was more marked for F2 and total figures than for F1 figures in both the raw and adjusted data. While these graphs do not indicate whether or not the differences in figurative language usage between topics is significant, they do support the hypothesis presently under consideration by demonstrating the existence of such differences among this segment of the sample. Thus, while this data does not indicate that all subjects used more figurative language on Topic B than A, it clearly indicates a trend in this direction, as well as a tendency for those who use more to change the amount of their figure production to a greater extent than those who use less. This lends further support to the hypothesis.

In order to determine whether or not the difference in the amounts of figurative language used in discussing Topics A and B was significant, single factor analyses of variance with repeated measures were carried out on the figure production data. The University of Alberta's Division of Educational Research's Anov 14 Program was used for this purpose. A total of eight analyses of variance were performed, comparing subjects' production of N, F2, F1 and total figures on Topics A versus B, using both raw and adjusted production data.

Table 7 presents the results of the analyses of variance. All eight analyses yielded F scores which were significant at the .05 level or better. For N and F2 figures, the F scores based on the adjusted data were slightly higher than those based on the raw data, while for F1 and total figures the reverse was true. It can be concluded that, whether raw figures or figures per 100 words are

TABLE 7

RESULTS OF ANALYSES OF VARIANCE: DIFFERENCES IN FIGURE PRODUCTION BETWEEN TOPICS A AND B FOR RAW AND ADJUSTED DATA

Type of Figure	Raw Data F=	Adjusted Data F=
Novel Figures	4.03*	4.58*
F2 Figures	8.89**	9.41**
F1 Figures	7.13**	5.17**
Total Figures	21.66***	19.67**

* $p \leq .05$
** $p < .01$
*** $p < .001$

considered, there were significantly more N, F2, F1, and total figures used by subjects in discussing Topic B than in discussing Topic A, which provides additional support for the major hypothesis of this study.

In summary, then, all of the results presented in this section support this study's main hypothesis. The descriptive statistics indicated that the mean number of all types of figures produced was higher for Topic B than for Topic A, and the analyses of variance established that in all cases they were significantly so. In addition, it was found that even the moderate producers of figurative language tended to use more figures of all types when discussing Topic B. Finally, a descriptive analysis of the differences in figure production between topics revealed that in all cases more people used more figurative language when discussing the more intense, emotional, and personally meaningful topic than used less, and that those who used more changed their figure production to a greater extent than did those who used less.

II. Secondary Hypotheses

A. Figurative Competence Domain

Because research suggests that figurative competence is not a unidimensional domain, it was hypothesized that there would not be significant correlations between subjects' production of figurative language in the interviews and their scores on the M.T.T., the other figurative task used in the study. Before examining whether or not this was found to be the case, it is important to consider the reliability of the M.T.T. scoring procedure.

1. Reliability of Scoring - As was mentioned in chapter three, a total of four scores were obtained for subjects on the M.T.T.: comprehension, preference, extra metaphors and total score. As the metaphor preference scores involved simply noting whether the metaphorical pairing was recorded in the first, second, or third position on the answer sheet, it was not necessary to check the reliability of this score. The extra metaphor scores were not checked for reliability either, as only eight subjects produced any, and those that they produced appeared to the researcher to be clearly metaphorical in nature. However, the metaphor comprehension scoring was checked for reliability, due to the nature of the scoring procedure, which involved judging whether the rationale given for the metaphorical pairing indicated that the subject fully understood, partially understood, or did not understand at all the metaphorical basis of that pairing.

The scoring was checked for reliability by sending ten subjects' M.T.T. answer sheets, 20% of the total number completed, to the primary author of the test, Dr. N. Kogan, for independent scoring. In fact, the answer sheets were scored not by Dr. Kogan himself, but by one of his graduate assistants who had been trained and was experienced in the scoring of the instrument.

The ratings of the independent judge agreed with mine in 135 of the 150 items scored, an agreement rate of 90%. Of the 15 items that were not agreed on 13 were in disagreement by one point. In only two cases did one judge give an item a full score of two and the other give it a score of zero. These figures indicate the reliability of scoring on the M.T.T. comprehension scale is sufficient to allow us to procede with an investigation of the relationship between M.T.T. performance and figure production in the interviews.

2. Results

In order to examine the relationship between the two figurative tasks administered in this study, Pearson correlation coefficients were calculated for all pairings of M.T.T. and figure production scores, using the S.P.S.S. 'Pearson Corr.' program. The resulting correlations were tested for significance by the same S.P.S.S. program. Table 8 presents the correlations among all M.T.T. and raw figure scores, while Table 9 presents those among M.T.T. and adjusted figure scores. The results shown in these tables indicate that while there are very strong correlations among the M.T.T. scores (5 out of 6 of these are positive and sigificant at the .01 level), and moderately strong intercorrelations among figure production scores (18 out of 28 are positive and significant, 11 of these at the .01 level, among raw figures; 15 out of 28 are positive and significant, 10 of these at the .01 level, among adjusted figures)there was no strong pattern of correlation between the two sets of scores. Of the 32 correlations between M.T.T. scores and raw figure scores, 17 were negative and 15 were positive, but none was significant. Of the same number of correlations between M.T.T. scores and adjusted figure scores, 14 were negative and 18 were positive, with only two of the latter being significant, both at the .05 level. We can thus safely conclude that there is no clear, consistent pattern of correlations between subjects' M.T.T. scores and their production of figurative language in the interviews. These results are consistent with the hypothesis, and

TABLE 8

CORRELATIONS MATRIX (PEARSON PRODUCT MOMENT)
M.T.T. X FIGURE PRODUCTION
RAW DATA

		M.T.T.				Figure Production							
		Comp.	Pref.	Extra	Total	N A	F2 A	F1 A	Total	N B	F2 B	F1 B	Total B
M.T.T.	Comp.	1.00	.58**	.36**	.90**	-.03	-.08	-.01	-.04	.11	-.14	-.09	-.12
	Pref.		1.00	.15	.88**	.14	.04	.17	.14	.17	.07	-.12	.01
	Extra			1.00	.37**	.08	-.08	-.03	-.05	.02	-.09	-.14	-.14
	Total				1.00	.07	-.03	.10	.05	.16	-.05	-.13	-.08
FIGURE PRODUCTION	N A					1.00	.27*	-.14	.21	.22	.22	-.11	.12
	F2 A						1.00	.29*	.82**	.26*	.25*	.29*	.39**
	F1 A							1.00	.78**	.28*	.23	.60**	.57**
	Total A								1.00	.36**	.33*	.53**	.60**
	N B									1.00	.20	.13	.40**
	F2 B										1.00	.12	.75**
	F1 B											1.00	.72
	Total B												1.00

* p< .05
** p< .01

TABLE 9

CORRELATIONS MATRIX (PEARSON PRODUCT MOMENT)
M.T.T. X FIGURE PRODUCTION
ADJUSTED DATA

		M.T.T.				Figure Production							
		Comp.	Pref.	Extra	Total	N A	F2 A	F1 A	Total	N B	F2 B	F1 B	Total B
M.T.T.	[illegible]	1.00	.58*	.36**	.90**	-.02	-.01	.08	.05	.12	-.06	-.10	-.08
	Pre[illegible]		1.00	.15	.88**	.11	.11	.26*	.25*	.16	.16	-.14	.07
	Extra			1.00	.37**	.09	-.05	-.12	-.09	.06	-.01	-.20	-.11
	Total				1.00	.06	.05	.17	.15	.16	.06	-.15	-.01
FIGURE PRODUCTION	N A					1.00	.34**	.18	.25*	.32*	.25*	-.10	.20
	F2 A						1.00	.17	.81**	.23	.15	.05	.19
	F1 A							1.00	.70**	.24*	.13	.35**	.36**
	Total A								1.00	.35**	.21	.24*	.38**
	N B									1.00	.18	-.01	.34**
	F2 B										1.00	-.06	.77**
	F1 B											1.00	.56**
	Total B												1.00

* $p < .05$
** $p < .01$

lend support to the conception of figurative compentency as a multidimensional rather than a uni-dimensional domain.

B. Creativity and Figurative Competence

It was hypothesized in Chapter One that while an unequivocal relationship between the divergent thinking component of creativity and all scores of figurative ability was not expected, significant correlations between some of the measures of each variable were. Specifically, it was thought for theoretical reasons that correlations might be found between the T.T.C.T. originality score, the M.T.T. comprehension and preference scores, and the novel figure production score.

The reliability of the authors' scoring of the Torrance tests was not checked in the way that the figurative language identification procedure and M.T.T. ratings were, simply because there was no simple and convenient way of doing so. However, as the manual of these tests indicated that by following its scoring guidelines closely it was possible to score the tests with an acceptably high degree of reliability, and as this procedure was followed by the researcher, it was thought that reliability of his scoring would be adequate.

The correlations between subjects' T.T.C.T. scores and their M.T.T., raw figure production, and adjusted figure production are presented in Table 10. These correlations were calculated using the same S.P.S.S. program mentioned earlier. As the table indicates, the correlations among the various T.T.C.T. scores are very strong. All of them are significant at the .01 level or better. The correlations between the T.T.C.T. scores and the scores on the two figurative language tasks are much less consistent. While there are a number of

TABLE 10

CORRELATIONS MATRIX (PEARSON PRODUCT MOMENT) T.T.C.T. X M.T.T. AND FIGURE PRODUCTION RAW AND ADJUSTED DATA

			T.T.C.T.			
			Fluency	Flexibility	Originality	Total
T.T.C.T.		Flu.	1.00			
		Flex.	.69**	1.00		
		Orig.	.76**	.66**	1.00	
		Total	.95**	.80**	.91**	1.00
M.T.T.		Comp.	.02	.01	.25*	.11
		Pref.	.23	.12	.43**	.31*
		Extra	-.28*	-.24*	-.22	-.28*
		Total	.11	.05	.35**	.20
FIGURE PRODUCTION	RAW. DATA	N A	.18	.08	.18	.18
		F2 A	.20	.18	.17	.21
		F1 A	-.11	.11	.01	-.04
		Total A	.08	.18	.13	.13
		N B	-.05	.13	.01	-.01
		F2 B	.16	.08	-.02	.09
		F1 B	-.03	.10	.03	.02
		Total B	.08	.14	.01	.07
FIGURE PRODUCTION	ADJUSTED DATA	N A	.18	.10	.19	.19
		F2 A	.23	.18	.23	.25*
		F1 A	-.10	.10	.04	-.02
		Total A	.11	.20	.21	.18
		N B	-.04	.17	-.01	.01
		F2 B	.12	.05	-.02	.06
		F1 B	.02	.15	.10	.07
		Total B	.09	.17	.04	.10

* $p < .05$
** $p < .01$

significant positive correlations (4/16) between the T.T.C.T. scores, especially the originality score, and some M.T.T. scores, there are negative relationships between the M.T.T. extra score and all of the Torrance scores, with three of these negative correlations being significant. The pattern that emerges most clearly is that there is a significant positive relationship between the T.T.C.T. originality score and the M.T.T. comprehension, preference, and total scores. These results provide partial support for the hypotheses that divergent thinking and metaphorical abilities might be linked.

If we examine the sections of Table 10 that deal with the correlations between the T.T.C.T. scores and the raw and adjusted figure production scores, we find quite different results. While 53 of the 64 correlations presented here are positive, only one of them is significant at the .05 level. The significant positive correlation hypothesized between novel figure production and T.T.C.T. originality is not found at all. In fact, there is no clear pattern of positive or negative correlations between these two variables. This absence does not support the previously mentioned hypothesis. The relationship between divergent thinking and figurative abilities, then, has been only partially supported. While there is some evidence to substantiate a positive relationship between the originality of subjects' divergent thinking and their performance on the M.T.T., there is very little else to support the claim for a strong relationship between divergent thinking and figurative abilities, especially the ability to produce figurative language in conversational settings.

In summary, this chapter reviewed the results of the study described in Chapter Three. The major hypothesis of the study, that subjects would use significantly more figurative language when discussing a more emotional, intense, and personally meaningful topic, was given clear and strong support. The secondary hypothesis concerning the relationship between the two different measures of figurative ability used, production of figurative language in the interviews and performance on the M.T.T., was also supported in that no clear, strong pattern of correlations between these two measures was found. This is consistent with the notion of figurative language as a multi-dimensional domain. Finally, the hypothesis that strong, positive correlations would be found between certain scores of the T.T.C.T., the M.T.T., and the production of novel figures was given only very limited support. Significant correlations between T.T.C.T. originality and M.T.T. comprehension, preference, and total scores were found, but virtually none was found between any of the T.T.C.T. scores and any of the figure production scores. There were no significant correlations between the T.T.C.T. scores and novel figure production.

CHAPTER FIVE

DISCUSSION

I. Major Hypothesis

The major hypothesis of this study was that subjects would use significantly more figurative language of all types when discussing an intense, emotional, and personally meaningful topic than when discussing a mundane one. The results presented in Chapter Four give very strong support to this hypothesis. While a few subjects used less figurative language on the more intense topic, a substantially greater number used more. Even those whose production of figurative language was only moderate (i.e. the middle 50% of figurative language users) used more figurative expressions when discussing the more intense, emotional and meaningful topic. Descriptive statistics indicated that the production of all types of figurative language was greater in the discussions of the more intense topic than in the discussions of the more mundane one. Finally, analyses of variance revealed that the differences in figure production between topics was significant in every case. This held true for both raw and adjusted data.

Before discussing these results in more detail, it is important to examine briefly the inter-rater reliability figures yielded by the present study for the figurative language identification procedure. While the overall agreement rate of 83% is above the minimum acceptable rate of 80% recommended in the Barlow et al. (1971) manual, it is slightly lower than the 85% - 91% rates cited by Pollio et al.

(1977) for other spoken language samples. There are two explanations for this finding. In the first place, the judges used in this study were inexperienced; none of them had any acquaintance with the figurative language identification procedure prior to using it in this study. Most of the other research that has used this procedure has been conducted at the University of Tennessee by, or under the supervision of, those who developed it. It is to be expected these researchers would obtain higher rates of reliability due to their greater familiarity and experience with the procedure than would the present researcher and his colleagues, who had never used it before.

Secondly, when the agreement rates yielded by the present study are examined in more detail, it becomes apparent thay they are highly dependent on the type of figure being judged. Consider the following results. Overall agreement rates were 94% for Novel figures and 97% for F2 figures, but only 71% for F1 figures. Agreement at 2+1 and 3+0 levels, the ones most frequently cited by Pollio et al. (1977), were 88% for Novel figures, 71% for F2 figures, and 56% for F1 figures. Ninety-one percent of all rejected figures were in the F1 category. It is obvious from these results that the F1 figures caused the greatest amount of disagreement among the judges, and they they were also largely responsible for the overall reliability rate not being higher than it was. In fact, if F1 figures are not included in the reliability calculations, the overall agreement rate is in the neighborhood of 95%.

It is interesting to compare the agreement rates for N, F2, and F1 figures from the present study to novel and frozen figures reported in Pollio et al. (1977). All of the studies cited there found that agreement rates were higher for novel than for frozen figurative language. This would be the case in the present study as well if F2 and F1 figures were combined (an overall agreement rate of 82.5%, and a 3+0 and 2+1 rate of 63.5% for combined frozen figures would result). However, it is clear from the figures presented earlier that by combining F2 and F1 figures we are losing valuable information, and covering up what seems to be meaningful distinction. Doing so hides the fact that some frozen figures are much more easily recognized and readily agreed on than others. It is safe to conclude, then, that because there are such marked differences in the pattern of agreements for F2 and F1 figures, the distinction between these two types of frozen figurative language is a valid one. Pollio et al's. (1977) claim that "novel figurative language is perceptually more compelling (more readily recognized when looked for) than frozen figurative language" (p. 72) thus needs to be modified. In fact, novel and cliche figurative language are perceptually more compelling than figurative words and phrases which are so commonly used that they have come to be generally accepted as literal in meaning.

A number of conclusions can be drawn from the data on the patterns of figurative language usage in the interviews. First, it is obvious that subjects used much less novel language than either type of frozen language. This finding is consistent with those of many other studies which have found that people tend to use much more frozen than novel figurative language (Pickens & Pollio, 1979; Pollio et al., 1977; Pollio & Pickens, 1980; Pollio & Pollio, 1979; Schonberg, 1974)

If we consider the nature of the different types of figurative language, such findings are not surprising. Frozen figures, whether of the cliche type referred to here as F2 figures, or of the type that are commonly accepted as meaning literally what they in fact mean only figuratively (this study's F1 figures) are to be expected to occur more frequently in people's speech. Novel figures, on the other hand, are, by definition, relatively unique and original, and are thus to be expected to occur much less frequently.

The second and most important conclusion that can be drawn from the data is that people do indeed use significantly more figurative language when discussing an intense, emotional, and personally meaningful topic than when discussing a more mundane one. All of the figures presented in Chapter Four support this conclusion. It can be inferred from this finding that individuals discussing their difficulties in counseling will use more figurative language than they normally do in their daily conversation.

In fact, there are reasons for expecting that most people would shift into figurative communication to an even greater extent in a real counseling situation than they did in this study's analogous situation. Because the Topic B interview situation was artificial in many ways, it lacked some important characteristics of actual counseling situations. For example, in most real counseling situations, the counselor would take time to build a relationship of warmth and trust between himself and his client. The process of building such a relationship might take a counselor several sessions. Obviously, it was not possible to duplicate this process within the confines of this study. The result was that, while many subjects did choose to discuss quite intense, emotional, and personally meaningful issues, a number of others appeared to go through a 'censoring' process, and ended up discussing matters that were not very intense or personal. Some seemed hesitant to discuss with a complete stranger, in a research context, issues of a highly personal and emotional nature, which is not surprising.

Another important difference between a real counseling situation and the analogous one used in this study concerns the immediacy of the issues discussed in each. When people seek counseling, it is most often because they want help in dealing with some matter which is of concern to them at that time. Thus, the events or experiences usually addressed in counseling have an immediacy for the client that was lacking for most of the subjects interviewed in this study. While the researcher attempted to get subjects to discuss issues with some immediacy for them by asking them to discuss a "fairly recent experience" in Topic B, only a few chose to discuss matters that were currently affecting their lives. Most discussed experiences or events that had happened long enough ago that their impact on their current mental and emotional states was much less than would normally be found in counseling.

The sum effect of subjects' 'censoring' what they chose to discuss because of the lack of a relationship between themselves and the researcher, and of their generally choosing to discuss issues lacking immediacy, was that, while the matters they discussed for Topic B were more intense, emotional, and personally meaningful than those they discussed for Topic A, they were for the most part considerably less so than those normally discussed within the context of counseling. Thus, if the primary thesis of this study holds true, we would expect people to use figurative language to an even greater extent within the context of real counseling than they did in this study.

Having established that people do use more figurative language when discussing more intense, emotional and personally meaningful topics, the next question is why? This author believes that the answer lies in two of the features of figurative language presented in Chapter Two. The first of these is that such language offers a much better means for expressing highly subjective experiences, including emotional experiences, than does ordinary literal language. Because the communication of subjective experience from client to counselor is one of the main components of counseling, it is to be expected that figurative language would be used frequently in this context. Indeed, the more intense, emotional and meaningful are the issues being discussed, the more difficult they are to express verbally, and thus, the more figurative expressions would be resorted to in an attempt to communicate them.

Secondly, metaphorical language has a special ability to communicate sensory, perceptual, cognitive and emotional information simultaneously and wholistically. Instead of describing seperately all of the various sensations, thoughts, and feelings being experienced, as literal language would, metaphorical language seems to be able to condense all of these elements of experience into a single image and present them to the hearer directly , so that he gets an intuitive sense of the experience. This special communicative ability of figurative language is likely another reason why it is used frequently in situations, such as those that occur in counseling, where one individual is trying to convey to another an overall sense of what his experiences are like.

In summary, then, figurative language's ability to express highly subjective experiences in a wholistic and intuitive manner leads people to use it much more extensively when discussing intense, emotional and personally meaningful topics than they do normally.

It follows from the above that the figurative expressions that individuals use are much more than just ornaments of language, or quirks of individuals' verbal styles; instead, they are important conveyors of personal meaning, attempts to express what is difficult, if not impossible to express in any other verbal manner. It is important that counselors should be sensitive to the use, and attentive to the meaning of such expressions, for by neglecting to do so they may miss entirely much of the important information that the client is revealing about himself.

One interesting, and unexpected, finding of this study was that not only were the mean number of N, F2, F1 and total figures higher for Topic B than for Topic A, but the standard deviations for each type of figure were also higher, in both the raw and adjusted data (see Tables 3 & 4). Stated simply, this means that there was a greater variance in the amount of all types of figures that subjects used when discussing Topic B than when discussing Topic A. The implications of this finding are two-fold. Firstly, the increase in standard deviations in Topic B is further evidence that subjects' usage of figurative expressions was definitely affected by the nature of the topic being discussed. Secondly, the higher standard deviations in Topic B indicate that the effect of topic on figurative language usage was not equal, nor in the same direction, for all subjects. As was pointed out in Chapter Four, while most subjects used more figures on Topic B, some subjects used less (see Tables 5 & 6). Some of those whose figure production was greater produced proportionally more figures than did others. The same applies to those whose figure production on Topic B was less. Thus, although there was a general trend for subjects' figure production to be greater on Topic B, and for the differences in figure production to be greater for those who used more than for those who used fewer figures on Topic B, this pattern was not followed by all subjects. While it is possible that the deviations from the above trends were due to chance, it is at least as likely, if not more so, that the topics had a differential effect on subjects' use of figurative language. Could it be that the more intense, emotional and meaningful topic systematically caused some subjects to use more figures and others to use less? If so, what factors distinguish those who used more from those who used less? Because the above results were not anticipated, these questions can not be answered here. However, they raise important issues that future researchers should address. The answers to these and related questions would provide us with a clearer understanding of how different individuals use figurative language in their speech.

The finding that subjects used more figurative language of all types when discussing the more intense, emotional and meaningful topic has a major theoretical implication: it provides empirical evidence in support of the notion that figurative language is used differently in counseling-type situations than it is normally. It was mentioned in Chapters One and Two that a considerable amount of research has been done on the nature and functions of figurative expression in counseling and psychotherapy settings, and that this research rests on the assumption that people somehow use figurative language differently, and, thus, that it has different functions, in these settings than in normal conversations. It was also pointed out that this assumption has never been tested. By testing it, and finding it to be correct, the present study gives credence to the claims of other researchers in this field who have argued for the special communicative and possible therapeutic functions of metaphorical language in counseling and psychotherapy. The results of this study suggest that research into the functions of such language in these contexts should continue, and that it may eventually provide us with a greater understanding of how figurative language can be used as a communicative and therapeutic tool within the context of counseling and psychotherapy.

II. Secondary Hypotheses

A. Figurative Competence Domain

One of the secondary hypotheses of this study was that because previous research suggested that metaphoric competence was a multi-dimensional domain, there would likely not be a consistent pattern of significant correlations between subjects' scores on the metaphor comprehension/preference task (the M.T.T.) and their production of figurative language in the interviews. This hypothesis also received strong support. Correlational analysis revealed a seemingly erratic pattern of low positive and negative correlations between M.T.T. scores and raw and adjusted figure production scores, with only two of the 64 correlations between these variables being significant at the .05 level. These results corroborate those of previous studies that have proposed that metaphorical ability is multi-dimensional.

The figures given in Chapter Four for the reliability of scoring of the M.T.T. indicate that this instrument can be scored with a high degree of reliability by relatively inexperienced scorers. As the scoring of this instrument was also reliable in the present study, we can proceed to discuss the results of the correlational analysis in more detail.

Before considering the relationship between the two figurative language tasks, it is interesting to examine the patterns of correlation among the various scores that make up each. In the last chapter it was reported that there were significant correlations between most of the M.T.T. scores. Specifically, the M.T.T. comprehension score was highly correlated with the preference and extra metaphor scores, and all three of these scores were highly correlated with the total score. The metaphor preference and extra metaphor scores were not significantly correlated. The finding that the comprehension and preference scores are strongly correlated is in agreement with Kogan et al.'s (1980) finding that the choice of the metaphoric pair as the most preferred was consistently related to the metaphoric comprehension score. Kogan and his colleagues found that these two scores were significantly correlated for all 14 samples reported in the 1980 monograph, at levels from .45 ($p < .05$) to .90 ($p < .01$). The results of the present study, together with those reported by Kogan et al. (1980), provide strong evidence supporting the notion that metaphor "understanding and preference are firmly linked" (p. 34), at least within the context of the M.T.T.

This study's finding that the M.T.T. comprehension and extra metaphor scores were significantly correlated is more difficult to interpret. Kogan et al. (1980) found these two scores to be significantly correlated in only three of the ten samples reported in their monograph. They saw the extra metaphor score as a measure of a form of metaphor production, and concluded from their findings that "a capacity for metaphoric comprehension does not necessarilly imply a disposition to produce unique metaphoric pairings" (Kogan et al., 1980). In other words, their results suggest that metaphoric comprehension and metaphor production are not closely linked. While the present study did find these two scores to be significantly correlated, this finding by itself is not sufficient to cause serious questioning of Kogan et al.'s (1980) conclusions. In the first place, the present finding, when combined with those of Kogan et al. (1980), still result in only four of eleven samples indicating significant correlations between the two scores. Secondly, the .36 correlation ($p < .05$) found in the present study is lower than the lowest of the three significant correlations ($r = .41$, $p = .05$) reported by Kogan et al. (1980). Thus, because the correlation between M.T.T. comprehension and extra metaphor scores is not stronger than it is, and because it is counterbalanced by a larger number of non-significant correlations in other samples, it seems safest to concur with Kogan et al.'s (1980) conclusions that metaphor comprehension and production are not closely linked abilities. In addition, the findings that the M.T.T. comprehension and preference scores were significantly correlated, but that the preference and extra metaphor were not, suggests that metaphor preference and production are not closely linked either.

The discussion of the correlations among different types of figures used in the interviews will be limited to the adjusted data figures, as these are figures which have traditionally been used by researchers in the field. If we examine the correlations between N, F2, F1 and total figures within Topics A and B in Table 11, the most obvious finding is that N, F2, and F1 figures are very strongly correlated to total figures. This is not surprising, as the total is made up of these three types of figures. In examining the pattern of correlations for Topic A, we can see that N figures were significantly correlated with F2 figures, but not with F1 figures. F2 and F1 figures were not significantly correlated with each other. In Topic B, N figures, while not correlated significantly with F2 figures, were correlated positively with them, whereas they were correlated negatively with F1 figures. F2 and F1 figures were also correlated negatively to one another. This pattern of correlations provides additional support for the notion that there are two distinct types of frozen figurative language. The above figures indicate that there was a closer link between N and F2 figures than between N and F1 figures, and that F2 and F1 figures were not significantly related at all. Indeed, in Topic B there was a negative correlation between the two. Such results suggest that the claims of other researchers (Pickens & Pollio, 1979, Pollio et al., 1977; Pollio & Pollio, 1974) that novel and frozen figure production are unrelated may be too simplistic because these researchers fail to distinguish between what seem to be two quite different types of frozen figurative language. It is more accurate to say that the production of novel figures is unrelated to the production of one type of frozen figurative language (F1), but may be related to the production of another type of frozen figurative language (F2). These results, along with the reliability results discussed earlier, indicate that the F2/F1 distinction is a valid one.

The lack of any clear pattern or substantial number of significant correlations between subjects' M.T.T. scores and their production of figurative language provides additional evidence to support Kogan et al.'s (1980) claim that metaphoric comprehension and metaphor production are not closely tied. It seems clear from the results presented in Chapter Four that the M.T.T. and figurative language production tasks are measuring two quite different and unrelated abilities. This conclusion is perfectly consistent with the conception of figurative language competence as a multi-dimensional domain, which was discussed in Chapters One and Two. Although both tasks require subjects to make figurative or metaphorical connections between thoughts, objects, events or experiences that are not usually associated with one another, the cognitive processes involved in them are apparently very different. The M.T.T. is primarily a visual task, though it does have a written component. It requires the abilities to observe, to comprehend the bases on which different pairings of pictures can be made, to choose a preferred pairing, and then to explain in written form the rationale for that pairing. The task is artifical for the subject in the sense that it does not occur naturally; it exists for him only because the researcher presents it to him. The task requires prolonged concentrated and conscious mental effort. The figurative language production task is very different. In spite of the fact that the interview situation is somewhat artificial, the task itself-- talking with another person—is very natural, and subjects use figurative expression without thinking, as common, natural elements of their speech. The production task requires much less conscious, concentrated cognitive effort than does the M.T.T. task. It also involves a different behavior mode, speech, than does the M.T.T., which involves the visual and written modes. It is quite apparent, then, that although both tasks do measure figurative language abilities, the abilities that they measure, and the processes underlying them, are quite different. It is, therefore, not surprising that subjects' scores on the two tasks are not correlated with each other to any significant degree.

To sum up this discussion, we have seen that the two figurative tasks included in this study have yielded results consistent with the hypothesis stated in Chapter One. The fact that the M.T.T. comprehension and preference scores correlated very strongly with one another, but hardly at all with the extra metaphor score suggests that the ability to understand and prefer metaphor is not related to the ability to independently produce unique metaphors. This conclusion is substantiated by the finding that subjects' scores on the M.T.T and their production of figurative language in the interviews were not correlated with each other in any strong or consistent manner. On the basis of these results, together with those of other researchers who have investigated the nature of figurative competence, it is fair to say that there is no single metaphorical or figurative ability. Instead, there seem to be a number of different figurative abilities, and people may have one or more of them without necessarily having them all. Thus, metaphorical competence seems to be a multi-dimensional domain, as was indicated in Chapter Two, rather than the uni-dimensional domain it was previously thought to be.

B. Creativity and Figurative Competence

The final hypothesis of this study was that there would be significant correlations between subjects' T.T.C.T. scores and at least some measures of figurative ability. Specifically, it was expected that there would be significant correlations between the T.T.C.T. originality score, the M.T.T. comprehension and preference scores, and the novel figure production scores. This hypothesis was only partially supported. While subjects' T.T.C.T. originality scores were correlated significantly with their M.T.T. comprehension, preference and total scores, there were virtually no significant correlations between their T.T.C.T scores and their production of any type of figurative language in the interviews. In addition, it was found that subjects' extra metaphor scores correlated negatively with all of their T.T.C.T. scores. Thus, while there appears to be a significant relationship between subjects' ability to think of unique and original responses on a divergent thinking task and their performance on a metaphorical comprehension/preference task there is no such relationship with their performance on tasks of metaphoric production. These findings lead one to question the validity of one of the secondary questions addressed in this study. In its original form the question dealt with the relationship between divergent thinking and metaphoric competence. However, in light of recent findings on the nature of metaphoric competence, including those of the present study, it seems that this question is perhaps too broad. A more accurate formulation of it might be the following: given that there appears to be no single, overall metaphoric ability, but rather a number of more specific such abilities, which, if any, are related to the divergent thinking dimension of creativity?

The present study's findings suggest that while there is a relationship between divergent thinking and metaphor comprehension, there is none between divergent thinking and metaphor production. In looking back to Chapter Two we see that almost all of the studies that found a strong positive relationship between divergent thinking and metaphoric competence actually involved measures of metaphoric comprehension rather than production (Malgady, 1977; Fava, 1978; Kogan et al., 1980). Most of the studies that examined the relationship between divergent thinking and figurative language production failed to find a consistent pattern of significant correlations between the two domains (Pollio & Smith, 1980; Porter, 1969). On the basis of these findings this study proposes that divergent thinking, especially the orginality component of it, may be related to metaphor comprehension, but seems unrelated to metaphor production.

One possible explanation for the above findings is related to the similarities between the tasks used in measuring divergent thinking and metaphor comprehension, and their differences from those used to measure metaphor production. The difference between the tasks involved in assessing comprehension and production were outlined earlier, and it is clear that creativity tests, especially the T.T.C.T., involve tasks that are much more closely related to the former than the latter. For example, consider the similarities between the T.T.C.T. and the M.T.T. In the first place, both are structured and administered as 'tests'; they are formal and artifical means of gathering information. The present study's figurative language production task was a much more natural and informal means of collecting data, and was not presented as a 'test' at all. The M.T.T. and T.T.C.T. also require considerable concentrated thought and effort, while the production task was more casual, and allowed the subjects to speak in whatever manner was comfortable for them, within a relatively unstructured setting, so that little conscious effort was required. Finally, where both the T.T.C.T. and M.T.T. involved visual and written tasks, the figure production measurement involved a completely spoken task. Thus, the reason why metaphor comprehension is more closely linked to divergent thinking could be the similarity of the tasks involved in measuring them. This explanation is given added weight by the fact that the only study that found a significant correlation between divergent thinking and figurative language production involved a highly structured, formal task of figure production as opposed to the unstructured, informal task used in the present study (Schaefer, 1970).

If we wish to gain a greater understanding of the relationship between the two dimensions being discussed, it would be wise for future theorists and researchers to be more precise in their investigations. They should endeavor to examine the relationships between specific dimensions of creativity and specific metaphorical abilities, rather than attempt to determine how these two abilities are related on a more general level, as they have done in the past. In addition, further study needs to be done on the nature of the cognitive processes underlying specific creative and metaphoric abilities.

III. Practical Implications

Because the present study addressed issues that were more theoretical than practical in nature, the practical implications of the study are, at the present time, minimal, and limited to the major hypothesis of the study. The finding that has the greatest potential implications for counseling is that people do indeed use significantly more figurative language when discussing intense, emotional and personally meaningful topics than when discussing more mundane topics. If we generalize these results to counseling then we can expect people to use more figurative language when discussing matters in counseling than they do ordinarily. This implies that figurative language is performing a special function within this context; specifically, that people are able to express thoughts and feelings through figurative language that they cannot properly express in any other way. The implication for counselors is that they must be sensitive to the use of metaphorical language by their clients, and should try to ensure that they have understood the thoughts, feelings and experiences that gave rise to such language.

There are a number of ways that a counselor might respond to a client's use of figurative language in a counseling interview. He could try drawing the client's attention to the figurative expression used, and then spend some time exploring it with the client, finding out why that particular figure was chosen and what aspects of it the client saw as being particularly applicable to his experiences. Together, the counselor and the client might examine the figure in more depth, and in the process might find elements of it that the client had not thought of when he selected it, but which are nevertheless quite applicable to his situation. In this manner both the client and the counselor might gain insight into the client and his experiences.

Another approach would be for the counselor to reply to the client within the terms of his metaphorical expression, and to carry on a discussion with him on a metaphorical level. The counselor's responding within the metaphor would help the client to know that he has been heard and understood, and a further discussion on a metaphoric level could lead to insight in the manner discussed above.

A third way of responding to a client's metaphor would be to accept it, affirm that it offers one way of viewing the situation it refers to, and then to propose an alternative one that casts the situation in a different, and perhaps more positive, light. For example, if a client explained that he felt as if he had been falling for a long time, had landed at the bottom of a deep pit and could not climb back out, the counselor might accept the figurative expression, then suggest that perhaps his situation was more like that of a pendulum, which continues on an upswing after reaching the bottom. This could lead into a discussion of the 'ups' and 'downs' of life, and how these were natural and to be expected, etc. Such an approach would attempt to use figurative expression therapeutically to help change a client's perception of himself and his experience.

The approaches to using figurative language outlined above suggest that such language could facilitate accurate understanding between counselor and client, could help the client gain insight into himself, and could even be used therapeutically to change certain negative or unproductive attitudes, perceptions, thoughts and feelings in the client. These suggestions are made only tentatively at the present time, as much more research into the nature and functions of figurative language in counseling is needed before we will know how to best utilize potential power of such language within the counseling context. The present study has not determined what the special functions of figurative language are. It has merely pointed out that there are good reasons for thinking that they do exist, and it has suggested that future research into the exact nature of these functions would likely be productive.

IV. Suggestions for Future Research

Before discussing some of the specific types of research that might be helpful in this area, I would like to make two general suggestions regarding such research. First, this study is in agreement with other recent studies in finding figurative language competence to be a multi-dimensional domain. One of the implications of this conception of figurative competence is that future studies should continue to use multi-probes when investigating this construct, especially when examining its relationship to other variables. Had the present study used only one measure of figurative ability, it would not have found divergent thinking to be related to one type of figurative ability but not to another, and a less accurate picture of the relationship between these two domains would have resulted. Thus, future studies should continue utilizing more than one measure of metaphoric competence.

Secondly, the present study modified the Barlow et al. (1971) procedure for identifying figurative language by distinguishing between two types of frozen figurative language, something that has not been done in previous research. The results suggest that the F1/F2 distinction is valid, and it is therefore suggested that future researchers using this tool should make this distinction so that a more complete and accurate understanding of the nature of figurative language production might be obtained.

The following are some suggestions for further research regarding the functions of figurative language in counseling, the nature of figurative competence and the relationship between figurative abilities and other abilities:

1. A study that would follow directly from the present one, and that would validate or invalidate the implications made from it, would be one which compared people's use of figurative language in actual counseling sessions to their use of it in ordinary conversations. Such a study could use a method similar to that used in this study to measure subjects' production of figurative language in non-counseling situations, but would require the analysis of videotapes of real counseling sessions to determine the amount of figurative language used in counseling. Because such a study could eliminate both the 'censoring' and 'lack of immediacy' problems associated with the present study, we would expect it to find even greater difference between the amount of figurative language used in counseling and that used in ordinary conversational situations than this study found.

2. A more in-depth, qualitative study of a small sample's use of figurative language in counseling could help us understand more clearly how and why people use such language. The few studies that have examined individual clients' usage of figurative language have utilized a quantitative approach similar to that used in the present study, and have worked from transcripts of counseling interviews rather than with actual people. A qualitative approach in which a few people's language was examined in depth, and their usage of figurative

expressions was discussed with them in detail would probably give us more insight into the nature and functions of figurative language in counseling than any other research project. Such a project could focus on questions such as when clients use figurative expressions in this context, what such expressions mean for clients, clients' reasons for expressing themselves figuratively, and the factors that determine which figures they chose.

3. Another interesting line of enquiry concerns the distinctions between those who use figurative language extensively and those who do not. The present study found that while there was a definite trend for subjects to use more figurative language when discussing the more intense topic, there were a number of subjects who actually used less. Are there any systematic differences between those who use a great deal of figurative language and those who use very little, or between those who use more figurative expressions and those who use less on the more intense topic? If so, what are these differences? Are intellectual, educational, personality, cognitive or emotional style, social background or other factors involved? Is figurative language's usefulness as a communicative or therapeutic tool in counseling related to the personal figurative language style of the client? If figurative language is useful in counseling only for some people and not for others, it is important to be able to distinguish between those who will find it useful and those who will not, and to use it as a tool in counseling only with those who will benefit from it. A study which examined such differences in figurative language usage, especially within the context of counseling, would make an important contribution to the literature in this area.

4. Apart from the above studies which would examine the nature and functions of figurative language within the context of counseling, further research needs to be done into the nature of figurative competence in general. It is now a fairly well established fact that figurative competence is not a single ability, but rather is composed of a number of different abilities. However, further research should be done in order to more specifically define what these abilities are, how they are related to each other, and how they are related to other variables. One study, for example, might investigate this study's suggestion that figurative language comprehension and production are quite separate abilities, and that divergent thinking may be related to the former, but is not linked in any significant way to the latter. Other studies might examine the relationships between specific metaphoric abilities and variables with which they have not yet been associated, such as personality, social or educational background, intelligence, or other factors. Through such research we would gain more knowledge about how and why people use figurative language which would help up not only in our understanding of its use in counseling, but also of its use in general as a phenomenon of human communication.

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APPENDIX A

INTERVIEW TOPICS

TOPIC A

I would like you to think about the town or city where you have lived for the last year. Take a few minutes to think about it and when you are ready I would like you to tell me what you have found life in that place to be like. The following questions may help you in this task:

- How would you describe this place to someone who had never been there?
- What are some of its good points and bad points?
- How would you compare living in this place to living in other places that you are familiar with?
- How would you describe your experience of living in this place?
- How do you feel about life in this place?
- Does this place have any special meaning for you? If so, in what way?
- Has living in this place had any impact on you as a person? If so, in what way?
- How would you sum up your experience of living in this place and the effect it has had on you as a person?

TOPIC B

I would like you to think back in your life to some fairly recent experience that has been extraordinary in some way. It can be either a very negative experience, or a very positive one, but it should be an intense experience that has had a significant impact on you as a person. Take a few minutes to think about it, and when you are ready I would like you to tell me about that experience. I am interested in hearing about the person(s), place(s), or event(s) that this experience involved, but want you to focus especially on what your experience of it was like. The following questions may help you in this task:

- How would you describe this experience?
- How did you react at the time?
- How did you feel at the time?
- What meaning did it have for you at the time?
- How do you feel about it now?
- What is its meaning for you now?
- What impact has it had on you as a person?
- How would you sum up this experience and the effect it has had on you as a person?

APPENDIX B

DESCRIPTION OF M.T.T. SLIDES

SET I

DESCRIPTION OF M.T.T. SLIDES

SET 1

1. violin*, singing canary*, tree
2. fish, winding river*, snake*
3. Man in the rain, thunderstorm*, angry man*
4. wilted plant*, hot tired runner*, glass of water
5. spinning top*, girl playing, dancing ballerina*
6. ancient tree*, rocking chair, a grandfather*
7. broken down house*, moldy swiss cheese*, rat
8. rifle, marching man*, flock of birds*
9. house with shades pulled down*, bed, woman with closed eyes*
10. worn-out woman*, grazing goat, barren landscape*
11. snorting bull*, boxer*, leather gloves
12. ocean, plane on fire*, fish on hook*
13. old man*, candle nearly burned down*, smoking pipe
14. woman with jewels*, city street, city lit up at night*
15. rose bud*, baby*, watering can

metaphorical pairings are indicated by an asterisk (*)

APPENDIX C

INFORMATION FORM

INFORMATION SHEET

1. Name: ____

2. Sex: M ___ F ___

3. Age: under 20 ___ 20 - 24 ___ 25 - 29 ___ 30 - 34 ___ 35 - 39 ___
40 - 44 ___ 45 - 49 ___ 50 - 54 ___ 55 - 59 ___ over 60 ___

4. Telephone number(s): ______________________________

5. Address: (to which an abstract of the research can be sent when it is complete)
____

6. Student status: (please check one)
undergraduate student ___ - year 1___ 2 ___ 3 ___ 4 ___
special student (part-time student, not currently working towards a degree) ___
graduate diploma student ___
graduate student ___ M.Ed. ___ - year 1 ___ 2 ___ 3 ___
Phd. ___ - year 1 ___ 2 ___ 3 ___

7. Program of study or major: ______________________________

8. Occupational status: full time student ___
part time student ___ occupation ___________
full time working ___ occupation ___________

9. Is English your primary language of thought and speech? yes ___ no ___

10. In what country did you grow up? ______________________

I hereby give Mr. David Hannah permission to use the information that I am giving him for the research that he is doing. It is to be used for research purposes only and is confidential. He has my permission to quote excerpts from the interviews that I am granting him with the understanding that they will be presented anonymously and not identified in any manner.

____

Please check here if you would like an abstract of the research sent to you ___